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★ FREE

#61

SEPTEMBER 18, 1989

MICR MES™

MAC @ WORK:

MacWrite II Meets Microsoft Word 4

REVIEWS:

Bondwell B300 Laptop

Personnel Policy Expert

Novell on Networking

President Ray Noorda On LAN Vs. Multiuser, Multivendor Environments, And Micro-To-Mainframe Connectivity

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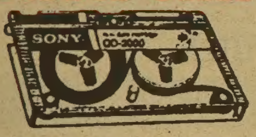

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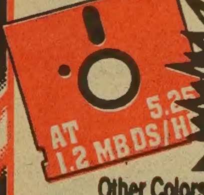

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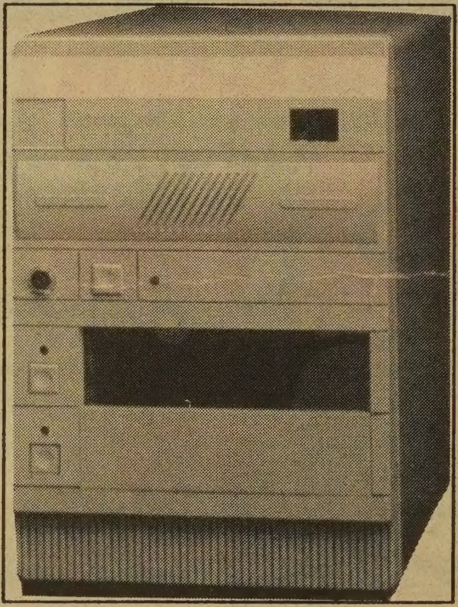

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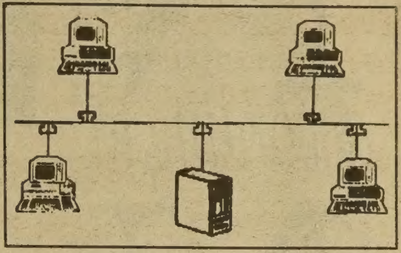

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MICROTIMES™

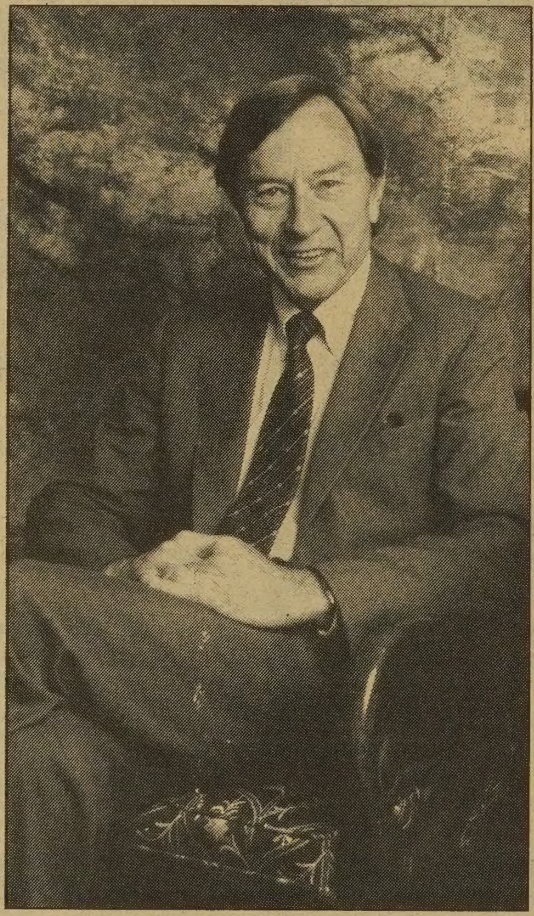
Networks according to Novell

PAGE 30

By Tony Rocco

Ray Noorda, president and CEO of the company that brought networking and personal computers together, talks about connectivity, the relative merits of LAN and multiuser configurations, and the changing LAN market.

COVER AND CONTENTS PHOTOS: MICHAEL JAY



REVIEWS

44
The Bondwell B300 Laptop
By Ed Kahn
A solid, dependable machine with some interesting features.

48
Personnel Policy Expert
By Woody Liswood
An intelligent program that allows to examine the ramifications of employee issues and determine policies suited to your particular business.

FEATURES

22
Success With Integrity: Silicon Beach
By Mike Markowitz
An interview with Charlie Jackson, founder of the independent-minded software house whose hits include *SuperPaint* and *SuperCard*.

ISSUES

20 Realizable Fantasies
By Jim Warren
Building a better keyboard.

102 Dvorak's Last Column
By John C. Dvorak
Dvorak unearths the legendary Mouse Ball Memo.

MAC @ WORK

66 MacWrite II Meets MS Word 4
Mary Eisenhart (*MacWrite*) and Tony Rocco (*Word*), both of whom would rather fight than switch, discuss the latest releases of their favorites.

74 BMUG
By David Morgenstern
Tales of miracle hard disk cures, the latest from Guy Kawasaki, and a report on the Boston Macworld Expo.

DEPARTMENTS

10
Calendar of Events

12
News and Analysis
By Paul Hoffman

54
PC Buyers Guide

82
User Group Network

98
Classifieds

100
Index of Advertisers

COLUMNS

56
UNIX
By Bennett Falk
Lex, yacc, and obscure UNIX utilities in general.

60
LANs
By Wayne A. Yacco
Issues in mainframe connectivity.

62
Business Computing
By Suzanna Musick
How to tell if you're ready to move up to a multiuser accounting system.

64
Amiga
By Matthew Leeds
What price virus protection?

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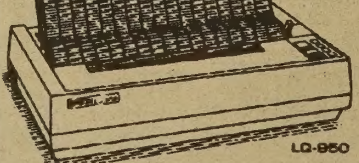

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September 19 SEF Meeting: OOP SIG. Mountain View. Software Entrepreneurs' Forum. Call: Dean Ritz, (415)691-6727.

September 20 Pasadena Users Group Meeting: Adam Osborne On Artificial Intelligence Today—Where Is It Going? Cal Tech. Pasadena User Group. Call: Steve Bass, (818)795-2300.

September 21–22 Second Annual Microprocessor Forum 1989. San Jose. Microprocessor Report. Call: (415)494-2677.

September 21 SEF Meeting: The Retail Marketplace. Palo Alto. Software Entrepreneurs' Forum. Call: Barbara Cass, (415)854-7219.

September 22 Workshop on CD-ROM, Scanners, Faxes, LANs, and Hypertext. Los Angeles. Los Angeles Chapter of ASIS. Call: Judy Roswell, (213)812-5365.

September 23 Computer Show. San Bernardino. East-West Computer Shows. Call: (415)388-8893.

September 24 Computer Show. San Diego. East-West Computer Shows. Call: (415)388-8893.

September 26–28 Distributed Systems Conference. Santa Clara. Dataquest Incorporated. Call: (408)437-8245.

September 28 SEF Meeting: Marketing SIG. Palo Alto. Software Entrepreneurs' Forum. Call: Don Morrison, (408)425-7222.

September 30 Computer Show. Pasadena. East-West Computer Shows. Call: (415)388-8893.

September 30 Computer Marketplace Show. Long Beach. RK Productions. Call: (408)978-7927.

October 5 SEF Meeting: Multimedia & HyperCard SIG. Foothill College. Software Entrepreneurs' Forum. Call: David Gewirtz. (415)345-4620.

October 7 Computer Marketplace Show. Pomona. RK Productions. Call: (408)978-7927.

October 8 Computer Show. San Bernardino. East-West Computer Shows. Call: (415)388-8893.

October 10 SEF Meeting: Macintosh SIG. Foothill College. Software Entrepreneurs' Forum. Call: Tony Meadow. (415)644-9400.

October 12 SEF Meeting: IBM Technical SIG. Palo Alto. Software Entrepreneurs' Forum. Call: Mike Schmit, (408)244-6826.

October 14 Computer Show. Ventura. East-West Computer Shows. Call: (415)388-8893.

October 14 Shop Till Ya Drop Computer Swap. Orange County. Richard James. Call: 1-800-433-7469.

October 15 Computer Show. Lancaster. East-West Computer. Shows. Call: (415)388-8893.

October 17 SEF Meeting: OOP SIG. Mountain View. Software Entrepreneurs' Forum. Call: Dean Ritz, (415)691-6727.

October 19 SEF Meeting: Elmer Galbi On Software Patents. Palo Alto. Software Entrepreneurs' Forum. Call: Barbara Cass, (415)854-7219.

October 26 SEF Meeting: Marketing SIG. Palo Alto. Software Entrepreneurs' Forum. Call: Don Morrison, (408)425-7222.

October 27–28 1989 Fall CUE Conference. Santa Clara. Computer Using Educators. Call: (818)355-8807.

November 19 Sound Design And Audio Post-Production On The Macintosh Seminar. Los Angeles. UCLA. Call: (213)825-9064.

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IN THE NEWS . . .

Ashton-Tate Announces Loss, Layoffs 12

Real-Time Translations Of Japanese Databases 12

Delays On Intel's 80486 Chip 12

Boston Macworld Expo Report 14

Apple's Multimedia Strategy 18

Paul Hoffman is an industry analyst who has been covering microcomputer technology for ten years. He can be reached on USENET (phoffman@well) and MCI Mail (264-3171). He also writes popular microcomputer books.

No Joy In Torrance: Ashton-Tate Announces Quarterly Loss, Product Delays, Layoffs

Torrance is not a happy place these days. Ashton-Tate, the well-known manufacturer of the *dBASE* product line, announced a loss in income for the quarter ending June 30, and expects a similar or greater loss for the next quarter.

At the same time, Luther Nussbaum resigned as president of the company. Ed Esber, Ashton-Tate's chairman, took over the job of president and announced that he would cut about 15% of the company's workforce.

The company attributed the losses to Ashton-Tate's decision to reduce the amount of software sitting in distributors' warehouses. (In the past, the company would push product on distributors near the end of financial quarters to enhance its revenue figures.)

The company attributed the losses to Ashton-Tate's decision to reduce the amount of software sitting in distributors' warehouses. Not mentioned, however, was the fact that dBASE IV sales have been much weaker than expected since the product was released earlier this year.

Not mentioned in the announcement, however, was the fact that *dBASE IV* sales have been much weaker than expected since the product was released earlier this year. The program was released with significant bugs that have not been fixed, and this has caused many major buyers to switch to competing products.

To make matters worse, Ashton-Tate followed up the announcement by saying that it will not commit to a date when the bugs will get fixed, prompting many people who would normally be buying *dBASE IV* in quantity to wait and see whether the bugs get fixed adequately in the next release.

Another product that Ashton-Tate had promised, a professional compiler for *dBASE* applications, has also slipped into software never-never land. Esber would not comment on why most of his competitors have had a similar product on the market for almost six months.

Another significant piece of bad news was that the company decided that it could not fit both standard *dBASE IV* and SQL in the same package and still run on standard PCs. The updated version of *dBASE IV* will come in two varieties: no SQL for standard systems, and SQL for systems with more memory and a DOS extender. This distinction between classes of users is similar to the one Lotus is making with its two versions of *1-2-3*. Even though over 80 percent of all PC users cannot run the higher-powered software, the best features are available only in the high-performance version. This is sure to cause more conversions to *dBASE*-compatible database environments, which are now flourishing.

Real-Time Translation Of Japanese Databases

In an effort to help Americans get at Japanese information, Fujitsu America has linked with its Japanese parent company to provide real-time translation of Japanese-language articles from its huge databases. The articles, which cover a wide range of technologies and news, are normally used only by Japanese.

Using its still-nascent automatic translation technology, Fujitsu's Scanfile will both process requests and print out documents in English. So far, only the request side works well enough for commercial use, according to Fujitsu.

Even with the poor translation quality of the output, the service should become popular, since the translation is done immediately. For example, a database request that yields ten articles would return the translated titles of those articles, allowing the searcher to decide which to look at. As the translation technology improves, the service will be of even greater importance to Americans working on projects with Japanese companies and Americans working in the US branches of Japanese companies. Of course, it will also benefit companies who are competing with Japan as well.

Intel's Chip Problems Delay Other Vendors' Systems

Software isn't the only computer commodity which misses its announced shipment dates. Sometimes computer manufacturers fail to make announced dates due to inadequate testing, slow manufacturing, or delivery problems.

Well, now there's another excuse: the chip manufacturer didn't get the chips out when they said they would. Intel announced that two of its latest products, the 80486 CPU and the EISA controller chips (described here last month), would both be delayed due to bugs.

Intel's delays mean that the manufacturers cannot

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get the finalized versions of the chips soon enough for them to finish their designs. That, in turn, leads to delays in manufacturing, which means that the widely anticipated 80486-based systems and EISA systems (not to mention the 80486-based EISA systems) will almost certainly not be ready in time for this year's COMDEX show in Las Vegas in mid-November.

The bugs in the 80486 chip were small but significant. The original design of the chip made it possible to run operating systems that ran on the 80386 chip. However, some of those operating systems used instructions that worked but didn't perform tasks the way Intel expected. It wasn't until Intel started testing the 80486 with various operating systems that they discovered the incompatibility.

The changes that Intel is making are minor, but will cause a delay of at least one month from the expected date of volume shipments. The bugs in the EISA chips are unrelated to the bugs in the 80486 chip, but the delay will hurt manufacturers more, since many people have grown tired of waiting for the first EISA machines to appear.

Although over a dozen would-be EISA manufacturers expected to show machines at COMDEX this year, it is likely that none of them will, or that a few will show machines that will differ from the final designs.

Macworld Expo News: Hardware And Multimedia

Now that most Mac owners have an SE or some flavor of the Mac II, hardware manufacturers are getting brave and coming out with boards for things other than display.

The Mac market is beginning to suffer the same stagnation problems that have crept into the IBM PC market: fewer new products. Most of the interesting news was in upgrades to current products, and many manufacturers were unable to show finished products due to delivery slippage (also known as being late).

Before the show, Apple made a splash by reducing the price of the Macintosh SE from $3169 to $2869 and changing the internal floppy drives from 800K drives to two 1.4 Mb drives that can read and write MS-DOS floppies. The price reduction presages reductions on other machines later this year, especially as RAM prices and the prices of many of the chips in the higher-end systems drop. The new drive makes the SE more attractive to users in companies that already use MS-DOS systems with 3.5" drives, since data files can be transported back and forth without the need for special software or a network.

On the novelty front, TV junkies can now watch a tiny screen of television on their screens as they work. MicroTV, available this fall, plugs into a Mac II or Mac SE slot. The initial versions, costing $300-$400, show a black-and-white image in a 1.75" by 1.25" screen. The boards are cable-ready and are intended more for video presentations and security than for soap opera addicts. A later upgrade will

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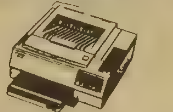

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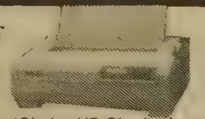

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NEWS
AND ANALYSIS

make the picture size larger (3.5" x 2.6") and include FM radio reception.

Mitem introduced a program that allows Mac users to run mainframe or minicomputer software through their communications boards under a Macintosh interface. *MitemView* is different from other products such as Apple's *MacWorkStation* in that *MitemView* does not require the mainframe or mini software to be altered. Instead, it determines what is going on by capturing all of the input and output that normally would have gone to the standard 80 x 24 screen, then translating menus and options into Macintosh menus and dialogs.

Apple has been unsuccessful in marketing *MacWorkStation* for existing applications, since very few software companies were willing to rewrite their mainframe software just so Mac users could interact with it. With *MitemView*, the Macintosh support department in a large company can write front ends for existing software without any changes.

Acius finally delivered *4th Dimension* version 2 more than a year after it was due. The new version is significantly faster than the previous one, and speed was considered to be *4th Dimension*'s weakest point. Acius also included a new report generator and label editor to simplify the most common database tasks. Acius said that it will offer a free upgrade to all owners of version 1, although the upgrade does not include documentation.

Microsoft made a bold move with its new version of Microsoft Mail by linking with other manufacturers to make it easier to send and receive mail from machines other than those which Microsoft supports.

Microsoft made a bold move with its new version of *Microsoft Mail* by linking with other manufacturers to make it easier to send and receive mail from machines other than those which Microsoft supports. At the announcement, manufacturers announced immediate or imminent support for links to UNIX (with the Simple Mail Transfer Protocol or SMTP), IBM mainframes running SNADS, DEC's VMS, Western Union's EasyLink, and faxes. This allows users who are part of a large network where mail is stored to read and write their mail on those other networks as if they were on the Macintosh network.

The new version also supports *Microsoft Mail* on PCs, allowing people on a mixed Mac and PC network to share mail and files. Microsoft already supports links to *Mail* through *Word* and *Excel*.

One of the big stumbling blocks for selling Macintoshes has been the high price of monitors and video cards. Many people find it hard to work on the Mac's small screen, but the cost of an SE with a larger monitor is prohibitive. Lapis Technology showed a new $450 card for the SE which lets you connect your Mac to an inexpensive IBM PC monochrome monitor. These monitors generally sell for less than

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$100, bringing the total cost to under $550. In addition, the card can drive multiscanning and VGA monitors, allowing a person with a PC to share the monitor with the Mac. The card, called the DisplayServer, can display up to 800 by 600 pixels, according to Lapis. Many people with SEs only use the free slot for a graphics card (if they use it at all), and the DisplayServer should help increase the number of people with external monitors.

Apple Announces Future Multimedia Strategy

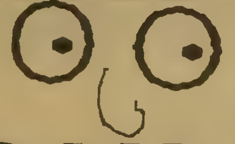
Video is the next big field in computers, according to Apple. In his keynote address at Macworld Expo in Boston, Apple President John Sculley emphasized that video standards are important and assured developers that Apple would lead them toward forming those standards within six months. In addition, his multimedia presentation showed Apple's belief that video will be the backbone of multimedia in the future.

Apple's approach to handling video in the computer goes directly against the approach that IBM and Intel announced earlier this year, but follows what Apple has always emphasized in the Macintosh: the user gets to manipulate, not just view.

The IBM PC is already far ahead of the Macintosh in its ability to display and produce video images at a low cost. However, Apple's approach of setting standards that video hardware manufacturers will follow make it likely that the video interface on Macintoshes will be more consistent and easier to use sooner than it will on the PC. Sculley's demonstration included a presentation by Steve Perlman of real-time video input and output in standard Macintosh windows. Although the hardware that was shown is not available and is only a prototype, Sculley made it clear that when it is released, it will fit into the current Macintosh architecture in a standard and easy-to-use fashion.

Many industry pundits think that multimedia (the mixing of images, text, sound, and so on) will become important in personal computers as hardware advances in the next few years. As adult literacy decreases and television becomes more popular, people will be more comfortable with computers that offer multimedia than with today's standards of text and static pictures.

However, displaying interactive video on a computer screen is very difficult and requires an incredible amount of disk space and hardware. IBM and Intel's standard for video images is based on compression outside of the user's computer, making the computer a playback-only device. Apple's standard, however, will allow people to create and modify video on their own computers. Of course, not everyone will be interested in being able to manipulate the images and sounds they are dealing with; not everyone is interested in high-quality WYSIWYG text and graphics today. What Apple is betting on is that there will be many applications where people will want to handle video just like they handle text today. ■



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Toward A Better Keyboard

Why, Daddy? Why Haven't They Done It By Now?

Try "dialing" by feel on a TouchTone desk-phone, but don't reach for the phone head-on. Instead, try turning the phone sideways to your hand—thumb resting below the handset cradle; four fingers on the four three-button rows. Four-finger dialing is then easy and comfortable—though clearly not the intended use of TouchTone's 4x3 layout.

It's easy because you have four parallel fingers (plus the thumb placeholder), rather than the three for which the TouchTone pad was apparently designed. The position's more comfortable because the keypad slope allows your hand to rest on the desk nearer its natural—vertical—position.

I've become so acclimated to this approach that I find ungraspable wall phones and pay phones distinctly tedious and mistake-prone.

So: Who will be first to make millions by offering phones with a 3x4 keypad to replace these 4x3 keypads made for Martians?

Key Bored

Another key issue: Surprise! Typewriter keys no longer need mechanical linkage to their type characters.

With such new-found freedom, try experimenting with a split computer keyboard. Have the left-hand and right-hand keys mounted on two separate rounded pods, each keyboard averaging about a 45-degree slope. The slope will allow more comfortable hand orientation. The separated pods allow you to place them at the sides of whatever you're paying attention to—computer display, reference papers, book, etc.

And, of course, a small thumb-operated trackball or two could be mounted on the tops of the pods; arrow and function keys could be slightly wrapped around the pod beyond the alphanumeric keys, etc. (Why should fighter pilots be the only ones to enjoy well-designed hand controls?)

Further, picture these keypods pivot-mounted to the sides of a compact portable for truly fumble-free laptop or beach-blanket use.

Bump And Grind

They were on the old Wyse-50 terminal keyboards. The antique HP-35 calculators had 'em (you remember HP-35s—the first of the handhelds, the ones with the erroneous *e* function). But, like free Sears catalogs and gas-island air hoses, they seem to be another very useful thing, now rarely available.

Copyright © 1989 by Jim Warren. All rights reserved. *Jim Warren founded the West Coast Computer Faire, the* Silicon Gulch Gazette *and* Infoworld *newspapers, Video Initiative and the DataCast proposal for broadcast-based paperless electronic newspapers utilizing personal computers. He was the founding host of the PBS* Computer Chronicles *series, founding editor of* Dr. Dobb's Journal, *and founding president of the Microcomputer Industry Trade Association.*

They are the tiny bumps on home keys—the "F" and "J" keys on a QWERTY keyboard; the "5" on a numeric pad. They allowed tactile, almost-subliminal sensing of home-finger positioning.

Bring back those beautiful bumps! (Those who dislike 'em can always grind them off.) Also, try putting tactile arrows or pointers on the tops of cursor keys.

It's the Law—Maybe

Are the California State Constitution and State Statutes available in machine-readable form? They should be—in a consumer-priced, citizen-priced government "floppy report" or as a floppy or CD product.

How often have you wondered what the law really is concerning some personal or business tempest? As often as you've wondered what the Bible said about *x*? Well, the Bible's been inexpensively available on floppies for years.

Not So Visionary

Who's going to make a compact, portable direct-projection overhead projector?

Some "portables" have slightly-folding lens-head arms that remain far too unwieldy. The most compact ones shine the light down from the lens head to reflect back up from a mirrored transparency surface—creating double images of all but the flattest transparencies and overlays.

Edge-mount the light and let it shine into and up through the transparency surface. Make the lens-head arm quickly detachable for packing with the base in a low-profile package.

Back From The Future

Exciting developments were outlined in late August, at an all-day "Groupware" conference organized by ISO WG8.3 (International Standards Organization, Work Group 8.3 on Office Automation). They concerned project support systems, shared document processing, organizational information systems, desktop teleconferencing, computer-supported collaborative work (CSCW), asynchronous work coordination, and numerous other powerful computer tools supporting group efforts.

Then, on the way home, I ran into a teacher friend of mine, and enthusiastically burbled about these groupware facilities and their advantages. He countered with his school district's approach to computer-assisted information-sharing.

He recently received detailed instructions on how to copy student information from classroom computer files onto paper forms, so staff could key the information back into the administrative computer. He also mentioned that administrative records already contained the same data in three other places. Sort of reminds me of the old law requiring a bellringer to walk ahead of horseless carriages, warning of their coming.

Like free Sears catalogs and gas-island air hoses, those small bumps on the home keys seem to be another very useful thing that's now rarely available.

(It illustrates a teachers' strike I'd love to support—demanding less idiotic bureaucracy, more time for teachers to teach, smaller classes, etc.)

Basic Math—Divide & Conquer

Metric's magnificent and digital is dandy, but other number bases are also valuable.

The number 12 remains popular with dozens and dozens of Anglo-Saxon craftspeople for reasons beyond tradition. Try using a centimeter-marked meter-stick to cut a board into three or twelve exactly-equal pieces—an easy task with an inch-marked yardstick.

Typesetters like 6 and 72—6 picas equal 72 points equal 1 inch. Lettering height is typically in points; line spacing and column width is often stated in picas. There's a reason—both are more variously divisible than metric's 10.

For increased programming utility with fast integer divisibility, let's replace 300 DPI laser printers with 360-pixel units, and have video displays based on 720 and 1440 pixels.

Quickies

Someone proposed this "adaptability test": Try sleeping turned around tonight—with your head and pillow at the foot of the bed. Interesting, or irritating?

New-monic: WYSIWES—What You See is What EVERYBODY Sees—relates to shared screens and group editors. If you don't know about such network-based collaboration tools, find out, lest you become obsolete.

It's pleasing to see that Apple incorporated a trackball in the LapMac keyboard—based, no doubt [hah!], on suggestions in last November's column.

Double Visions

Send realizable suggestions to Jim Warren, Realizable Fantasies, 345 Swett Road, Woodside CA 94062. Published proposals will be attributed to their authors unless anonymity is requested. ■

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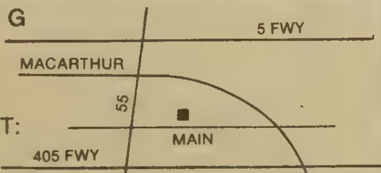

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Success With Integrity

Currently in the news again with *SuperCard*, San Diego-based Silicon Beach Software has been a leading purveyor of Macintosh tools since the days when it parlayed the success of its games into the development of graphics and productivity tools such as *SuperPaint* and *Digital Darkroom*.

When the Macintosh came out in 1984, it came to the attention of Charlie Jackson, a Marine veteran and DOS consultant living in San Diego. Inspired by the machine's capabilities, he became a certified Apple developer and spent his life savings on a Lisa and a Macintosh. Before the first game, *Airborne*, shipped, he and his wife had mortgaged their house to finance its production. However, the strategy of using game sales to bootstrap the development of other software proved effective: as Jackson says, "There's always room for another good game. We wouldn't hit heads with a big established company and maybe get blown out of the water because if we made a good game, it would sell. Even if there were another two good games, it would sell."

The success of *Airborne*, and later of *Dark Castle* and its successors, made the creation of tools like *SuperPaint*, *Super 3D*, and *Digital Darkroom* possible. In the years following, Silicon Beach developed a unique style of doing business and has greatly broadened its range of all-Mac products.

In a recent interview, Jackson discussed his company's evolution, its culture, and why it all works. Starting with its Hawaiian-shirted employees in their palm-tree trade show booth.

Small Is Beautiful At Silicon Beach

By Mike Markowitz

First, talk about the Hawaiian shirts.

I always wear Hawaiian shirts. We do that for a couple of reasons. One, I'd rather not wear a suit and tie. Two, if you're going to a trade show, you're trying to be noticed, and people recognize us. They know who we are, even at the parties. And parties are part of the whole thing. We want people to think we're real people and they can come talk to us.

And also, we're making a statement a little bit. We're not taking it too seriously—we don't take ourselves too seriously. We can still have our fun in this industry.

You stuck to a plan of using the games as a springboard to the productivity and high-end tools that people want in business.

Yes. Most people don't know this, but that was the plan all along. To be an entertainment software company, you must be on all computers. The Macintosh and three or four good games a year can support a company of five to eight people. Which is fine if that's what you want to do. But that isn't what I set out to do.

We did good games not because we wanted to do good games, but because we wanted to do good Macintosh software. Because I was trying to build something in the long term here, we could be competitive by building a product people would want. The way to do that is to make something that's really good, really clean, and have it be something that, for some reason, people will want. So therefore my background as a consultant comes into play, what things will sell, what things will not. I have some feel for that.

The striking thing to me is how few and how poor games have become. Are games dead?

Not really. What it is is that people aren't willing to put in the effort it takes to make a good game. They want to make a quick thing and just take six months and slap something out there in the marketplace. We've succeeded because we don't take that approach.

I sound very self-serving when I say this, but the philosophy here is that if it's really hard to do, that's what we want to do because other people won't. When the programmers come in and we talk about doing this and that, and they say, "Oh, man, that's really tough. It's gonna take six months, it's gonna take a year, it's gonna take a year and a half," my eyes light up. I see opportunity.

We're going to be focused on productivity, on graphics in particular. We're not restricting ourselves to graphics, although that is our primary focus.

You'd describe yourself more as a visionary than a technoid?

I'm an entrepreneur. People will think of me as a visionary, but I hesitate to say things like that about myself. I do play that role within this company. That's not quite the same as claiming to be a visionary in the industry.

What I bring to this company is the background and feeling for what people want and what they don't want. I'm the consumer advocate. The software has to be good. It has to be right for the everyday user before it gets by me and has to go out.

I do a lot of the design of the software. I don't come up with the new ideas. Other people here can do that. They come up with ideas, I say, "Yeah, this is good. This is not good. Yeah, we can sell this; we cannot sell this." And then as we do the product, I refine the user interface. I do a lot of the detail work

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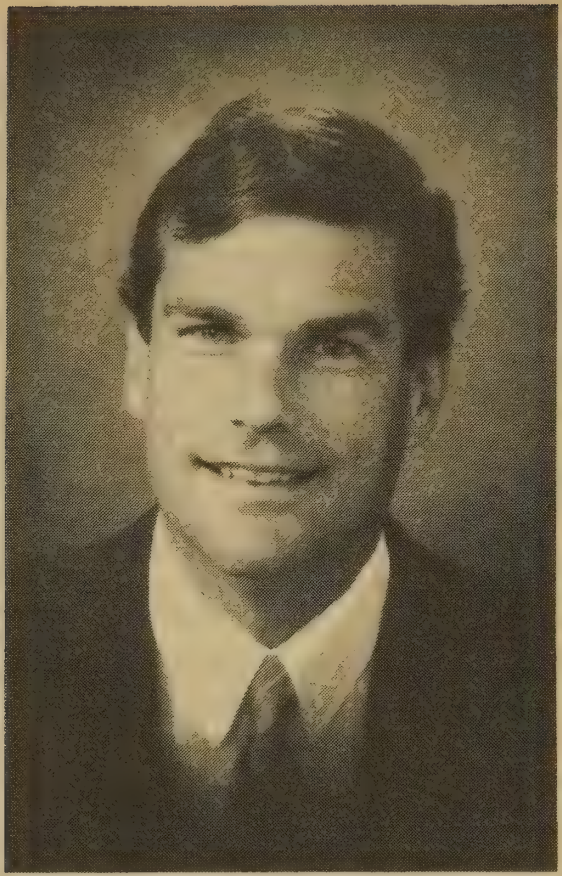

"One basic thing that I wanted to do was build this up on my own without bringing in outside financing, to which I am then beholden, and maybe even they've got control or something like that. Most companies have to get serious financing. We managed to not do that, which is quite an accomplishment."

—Charlie Jackson

on the user interface, actually.

So you're saying, "We need this feature, we don't need that."

I certainly get involved in all those sorts of decisions. Now that we've grown a lot bigger, we have other people doing all this. I don't do it all myself. We're bringing in lots of people who can take a lot of this on, and I look at those kind of details less and less now. But I'm still very closely involved with almost all of our products.

Obviously in the industry you're making a transition from a "toy" company to a "real" company. Talk a little bit about your company's problems and pitfalls in making that transition.

I'm not sure if I can identify problems and pitfalls. We identify very much with *Dark Castle* and *Beyond Dark Castle*. We recently put out another game, *Apache Strike*, which is not block-buster status like *Dark Castle* and *Beyond Dark Castle*, but is a good little game. We did those because we felt we could make some money and that those products financed the growth of the company.

One basic thing that I wanted to do was build this up on my own without bringing in outside financing, to which I am then beholden, and maybe even they've got control or something like that. Most companies have to get serious financing. We managed to not do that, which is quite an accomplishment.

You haven't had to go public or get any sort of venture capital for what you're doing?

I got a small investment in the second year from a personal friend. Going public is an option open to us later. We're not anywhere near the stature in size and revenues that you have to have to go public. So that's not an option right now.

Not too long ago I would have said, "We don't need that, I don't want to do that." I still don't want to do that. But as the company's gotten bigger now and we're starting to have to compete with companies like Claris and Aldus, we'll go public eventually. That may be something that we'll have to do in the future. That's an open question.

That's got to be driven by whatever your reality is at that time rather than personal wishes.

Yes. I've come to understand the financial side of the business. It's been a slow, steady educational process for me. I didn't come in here with a background of knowing how to run a business, knowing about large-scale financial things like that. I've got people around me that do know things like this who advise me real well.

To be honest, I've only fairly recently come to really understand what some of these things are about. What it means to get venture money and what you give up. Going public and what the pros and cons were. I used to think it was only cons. Sometimes to compete you need that stock. You need to be able to do things with that stock and with that money that you have.

We don't have the money, for example, to acquire a product in competition with Aldus. These companies are now paying two and three million dollars to buy a product, which is outrageous in my opinion. I think this will stop later, because I think that's getting a little high just to acquire the rights to a product. I'm not talking about buying a company. That's a whole different matter.

We can just continue as we are, privately held—really, "family-owned" is the way I would put it, my wife and I. She was involved right from the very beginning when we were formed. We were working out of my home for the first half a year. Shipping everything out of my house. That's what we did for quite a while.

We can continue to operate like that, and we can do that if we want, if that's really the most important thing. It will hinder us a little bit in some ways.

But we can compete with our products. They're profitable, so we can go forward. Quite simply because we've had no choice. We've had to be profitable. Think about it. We don't have outside money. So if we're not profitable, where does it come from?

There's almost an inverse relationship between the size of the company and the quality of the product. Little software boutiques where every line of code is a labor of love. Look at some of the catastrophes in the history of Mac software. Those have come from big companies. Like Jazz.

I don't think it's necessarily the size of the company. It's much more complex than that.

It's the culture?

Yeah. Rather than it just being the size of the company, the corporate culture may be more the determining factor. There's been lots of small companies that have done poor quality products as well, but you tend to forget about them because they go away. Of smaller companies, the only ones that can survive are the ones that do a really good product. With a larger company, some of them can do great products as well. Microsoft has some very good people up there. They've had some *faux pas* and all like that, but they're very strong in some of the things they're doing. *Excel* is an excellent product.

If you look at Lotus and what they did wrong with *Jazz*, a couple of things come to mind. But mainly I would say they just went along saying, "We are Lotus. We can create this product. This is what we'll say about it." And they did not really understand the Mac market. I don't know if they do yet.

The Macintosh market is dreadful. If I were going over to MS-DOS, I don't know how we would do that because I'm not sure if we know that market. But it's a little more straightforward, I think.

Well, graphics on that side are a miss.

Yeah. Just in general, if we were trying to compete in the MS-DOS world, maybe we would do something similar. But since I founded the San Diego user group, I've been right there with the Mac from the beginning, we've grown with it, we understand the Macintosh market here. And one of the aspects of it is that people won't take it just because it's Lotus and because they have *Lotus1-2-3*. They're not the same kind of people who buy the MS-DOS clone computer or even the IBM computer. They don't say, "Well, this is what everybody has, so it's better to be mainstream."

The people who have chosen Macintosh have looked and evaluated and made a decision that there's something there that they want. They're going to do the same thing with software. So they did that with *Jazz* and it didn't measure up to expectations. Another mistake Lotus made is that they got expectations too high, but that's been said before. That was a big problem. I think that what happened with *Jazz*, too, was that it was a program that needed one megabyte of memory and they tried to stuff it in a 512.

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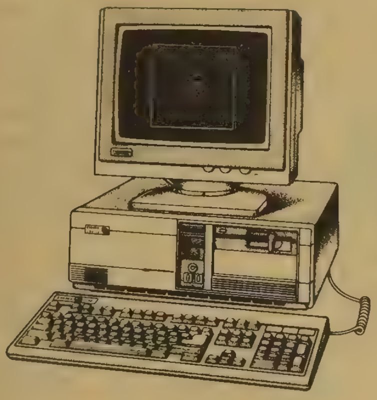

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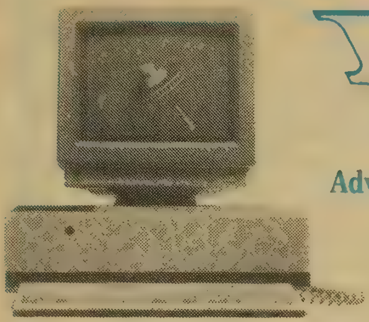

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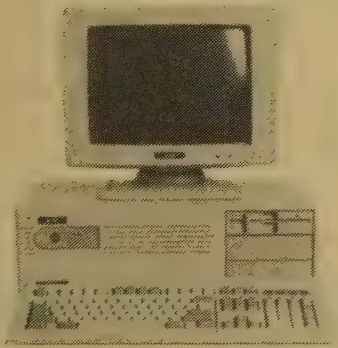

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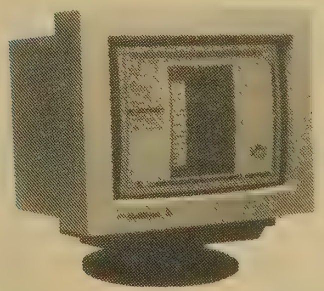

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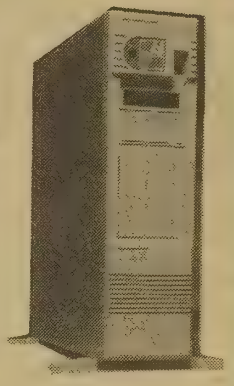

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I'll finish by saying the corporate culture is important because what that is all about is what kind of products will you produce, and will you have that real quality there, and do you understand the market that you're in?

Think about the corporate culture of the Marine Corps.

That's interesting. I've never had anybody say it that way to me. I've never really thought about that.

There's a certain commitment to excellence there.

That's right. I was a Marine officer. You know, I went through officer candidate school, which is from boot camp. And I went through seven months of basic training, which all officers went through. And I went through another couple of months of communications training. I had over a year of training.

The officer corps of the Marine Corps is one of the finest groups in the world. Well, I'm biased, but that's my opinion, that's how I feel about those people. That's why I went into the Marine Corps. I was Navy ROTC and I opted for the Marine Corps.

There's another thing that's stressed even more than excellence, and that's integrity. Integrity is the key word to a Marine officer. I had two other Marine officers working here for me in key positions. We try all along to do business right. What that means is if we tell somebody we will do something, we honor our commitment. If we have debts, we pay them.

We got hurt the second year by the bankruptcy of our largest distributor. It nearly put us out of business because they owed us so much money. We ate it. Later we got 20 cents to the dollar when we didn't need it anymore.

So we called people and said, "This is what's happened. We can't pay you all of that right now." We set up this schedule, which is what you're supposed to do in business, and we paid that schedule. My wife and I didn't get paid. The employees got paid. We paid off our debt. We didn't advertise until we finished paying off, then we advertised again.

Which explains why we didn't see anything of Silicon Beach for a short time.

Yes. The summer of '86. We did not exhibit at the Expo in Boston because we didn't have the money. We have this funny little way of doing business here. We don't spend money we don't have.

That's a very strange attitude in American business. I wish we had a government like that.

It *is* a very strange attitude. That has been a basic premise around here, and that's why we're still here. We focus on the important things: the products. The product is key. You have a good product to sell, you can stay in business. The marketing and things like that all follow along.

Yeah, we're getting much better at that stuff too, we're getting more sophisticated. We've made the transition. Basically, we're still marketing our games, which is fine. We're selling those, now we're making money off of them after all the effort we put into them. We will continue to do that as long as possible. But we aren't developing any more games in-house. We're not putting our valuable resources in developing games instead of putting them on our graphics and our productivity line.

That's just a business decision, that's just a question of where I put my limited resources. Nobody has unlimited resources, nobody. And in our case, since we don't have all this outside funding, we're not spending other people's money; we must be very careful where we spend ours.

Common sense dictates you that you put the money where you can make more money.

And I'm trying to build up a certain kind of company.

Are there some big chasms in the market where if you had a product you could sell a million of them?

In the early days of Macintosh I could just talk freely about this stuff. But the competition has really heated up now. And I know there are other people working in some of these areas, and I don't want them to know where we are. We may come in, and we may come in earlier than them and knock their socks off. There are companies that react very, very strongly to competitive moves. We saw them do this with Aldus *FreeHand* and with our autotrace technology that we showed in *Digital Darkroom*. If we hadn't shown it in January, they probably wouldn't have done anything about it.

So now we have to play our cards very close, which is a little hard for me sometimes because I like to talk about this stuff and have fun talking about it. But I'm having to be a lot more careful. ■

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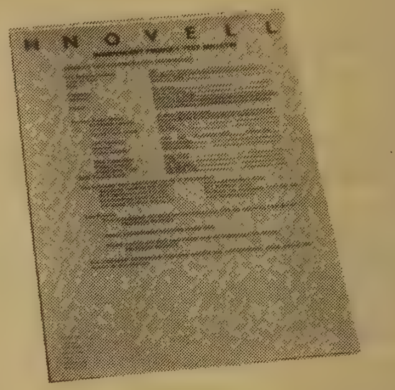

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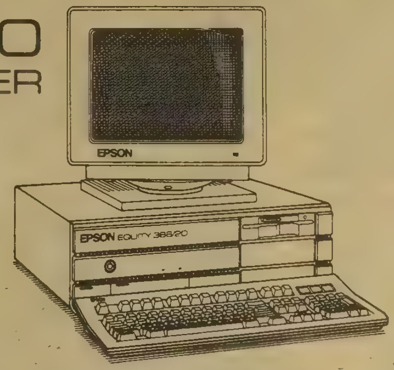

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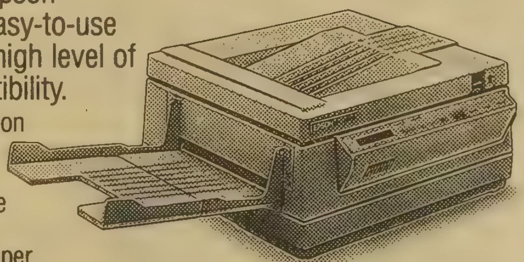

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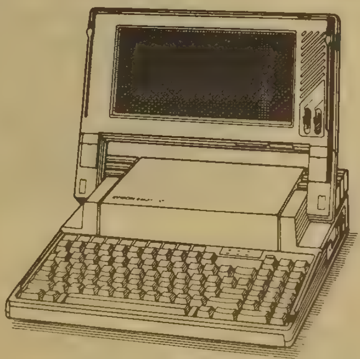

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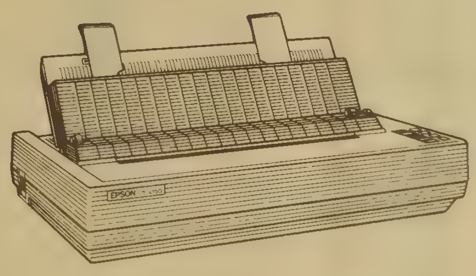

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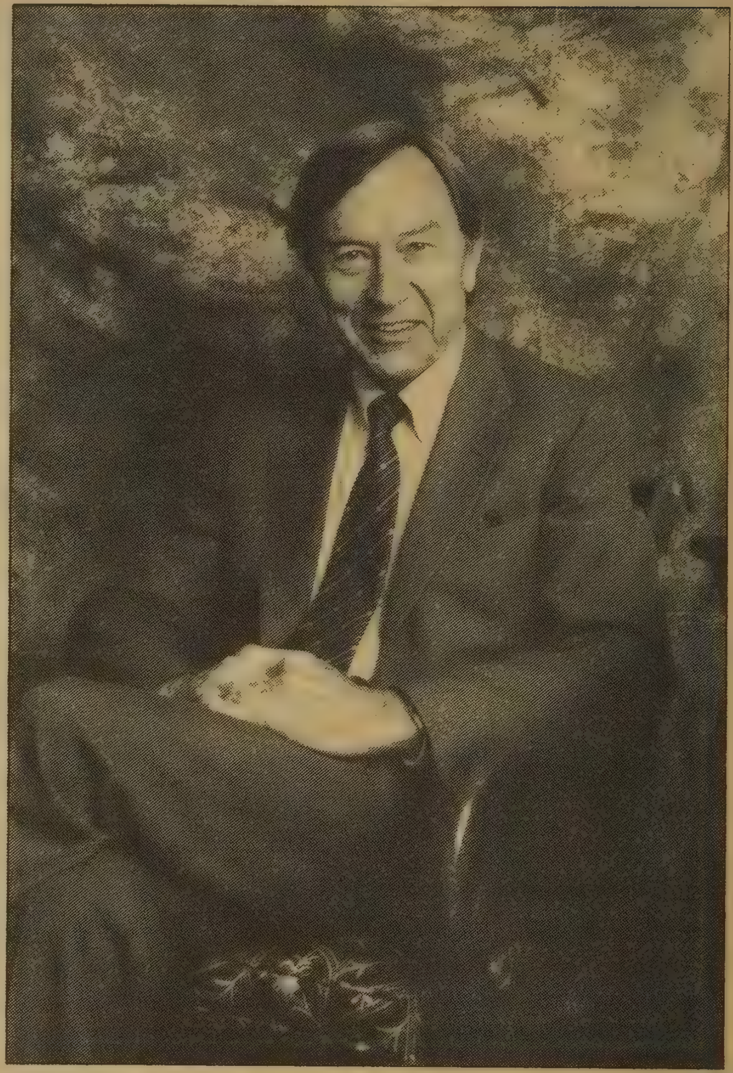
Networks according to Novell

President/ CEO Ray Noorda On LAN Vs. Multiuser, Multivendor Environments, And Other Issues

By Tony Rocco

Photos: Michael Jay



You can't open your mouth about networking without mentioning Novell, Inc., a Utah-based company that holds an estimated 62 percent share of the LAN operating system market. Its famous NetWare operating system has been ported to not only a broad variety of microcomputers, but many minicomputers and mainframes as well. NetWare also supports virtually all popular personal computer and network hardware and software components.

What Novell offers through its NetWare operating system is something called distributed processing—computers of different sorts, running different operating systems, all networked together in such a way as to share the same files, applications, and peripherals.

This type of computing differs from more traditional shared computing in that rather than have a single processor doing all the computing work for a number of different "dumb" terminals—one computer with multiple users—numerous desktop computers are connected to a central file server with the sole function of keeping track of files and application software shared by the different desktop computers. In this arrangement, the real computing work is done by the individual PC or workstation, rather than a central, shared processor.

The advantages to this new distributed way of doing things are flexibility and cost. A network can be started with two PCs and expanded as more are needed. In addition, those PCs can work under different operating systems entirely, like MacOS and DOS, and use with the same shared, NetWare-compatible applications on the server, as well as their own applications. (Sharing applications and files is the name of the game.)

This is a major advantage. You don't have to standardize on one sort of computer. You can keep those Macs and PCs and have them share the same applications and peripherals, while maintaining their standard interfaces. (People who know one system or another well would typically rather fight than switch, anyway.) It also means you don't have to invest in new desktop computers in order to have a viable network.

Also on the cost/efficiency side, the price of PC technology continues to come down, thus making distributed computing a more and more affordable option. Whereas you might have to invest a considerable sum to move up from a 10- to a 20-user shared processing system, moving to a larger distributed network is usually less costly.

Distributed computing is now beginning to have a significant impact on corporate America, once the sole province of highly centralized, shared processing environments. While corporations aren't yet ready to consign their minis and mainframes to the trash heap, they are beginning to experiment with networking their minis and mainframes

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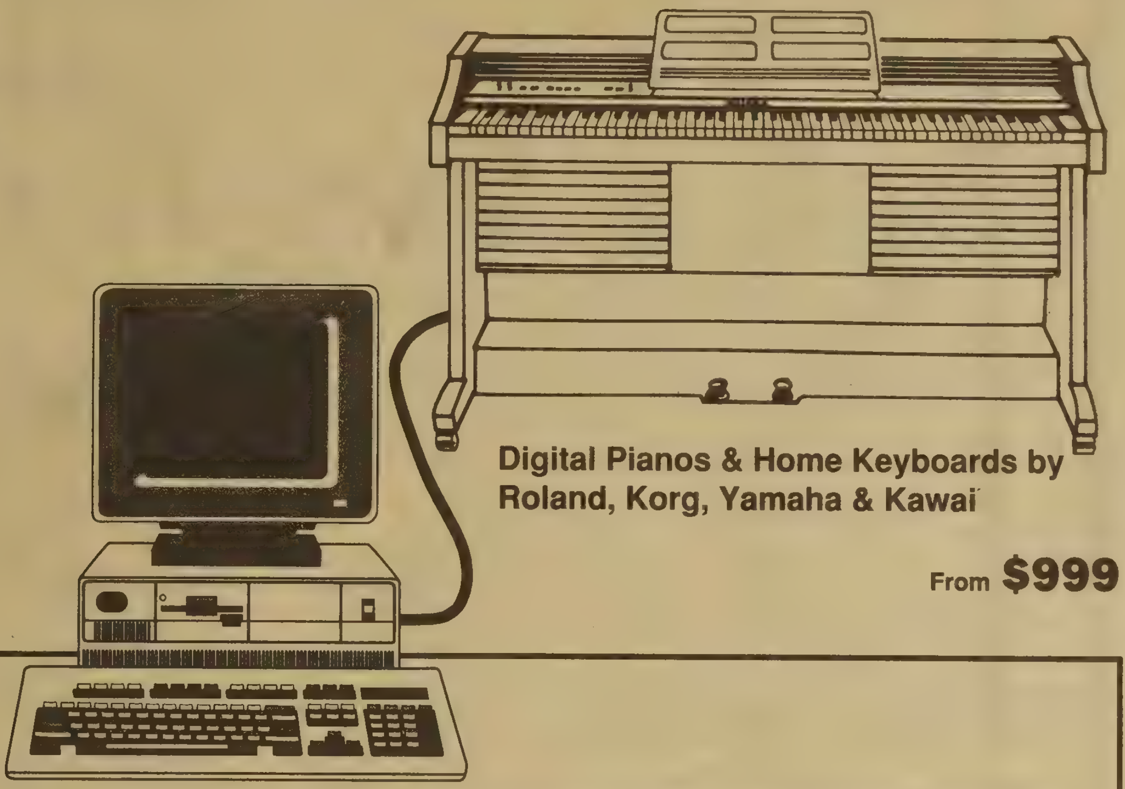

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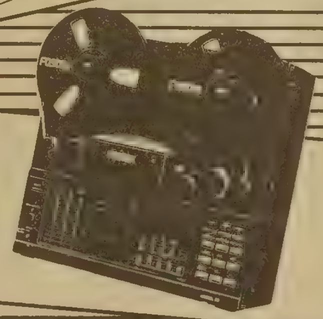

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Ray Noorda, president and CEO of Novell, has watched the networking industry grow dramatically in his seven years with Novell. He realized early on that the future of networking would include multi-vendor environments from PC to mainframe. Noorda, a kind man with a modest, self-effacing manner, came to Novell Data Systems in 1982 from System Industries, a supplier of hard disk subsystems. At that time, Novell was mostly a hardware company.

Noorda changed the focus of the company from being just another PC-compatible and peripherals supplier to a cutting-edge, networking software specialist. He also helped start LANDA, the Local Area Network Dealers Association, a nationwide organization that serves to bring networking dealers together to share information and expertise.

Noorda spoke to *MicroTimes* at LANDEX, LANDA's equivalent of COMDEX, in San Francisco, where he gave a keynote address. What follows is Ray Noorda discussing the role Novell has taken in shaping the present and future of networked computing.

When you got involved with Novell in 1982, had you had been involved with LAN technology before?

No, really not. I had become acquainted with it a little bit because the industry was developed around here, and I was running a couple of companies at that time.

In the late '70s I was president of System Industries. We were a disk subsystems supplier; we watched Corvus get into that business of really supplying disk subsystems for PCs. So we considered doing that. And then they developed this capability, now called OmniNet, to let people share that disk. That got to be a fairly substantial part of their business. We looked at it at that time; I became acquainted with what they were doing, but I hadn't seriously thought about getting into that business.

Did it occur to you then how significant LAN technology would become in five or ten years?

It really didn't occur to me at that time to be involved in it, although I was selling products into the DEC environment. There wasn't a whole lot of networking involved in that business.

I got a little more familiar with what could happen when I became the president of another company, Boschert, which is a power supply business. This was in 1980. And our sales people started bringing in PCs, mostly Apples, to do their spreadsheets. They couldn't get on our VAX system because it was typically overutilized for other things.

I watched some of the folks we were supplying power supplies to, including Corvus, and they were becoming more involved in the networking business. And then it happened that two of the board members at that company became board members on 3Com's board. So I became acquainted through other people with what was happening in the business. I watched them a little bit and talked to them.

When did it click in your mind that LAN technology was really something big?

Really, when I visited the Novell Data Systems booth in 1982 at COMDEX in Las Vegas. I was invited to take a trip down there by the owners of the company to see if I would be interested in helping them with the business. So I went down to look at it and saw a marvelous demonstration about tying together PCs, CP/M as well as DOS.

That was when it occurred to me, as I looked to solve a manufacturing problem at a lower cost than was available through DEC equipment. So that was when I really became interested in networking, but networking to UNIX boxes with UNIX workstations. I saw this demonstration at COMDEX Fall about a networked system—it was a 68000-based product with lines going directly out to each PC. So it wasn't quite like the networking we envision today. It was a so-called star network, which is a whole lot more similar in configuration to the shared processing environment, dumb terminals connected to a box.

So I saw that, and I was familiar with what the 3Com people were doing, having a linear system. It became quite clear, talking to the people I visited in Utah, that we could put it on any configuration; we could put it on a star network, we could put it on a linear system, anything was adaptable to it. That's when I became really excited about it, because I thought it would be a long time before people really centralized a few standards.

What is the advantage of having a networked system of PCs over a centralized processor with dumb terminals?

In the beginning PCs were standalone products. Corvus and other people responded to a need to share peripheral systems. But in beginning of that process, it became clear that that sort of connect, although it provided some access to file capability, didn't allow them to share files.

As it became clear that they could share files through Novell, and to a lesser extent through companies like Nestar, then it was quite clear that there was a capability there that didn't exist in the shared processor environment. Namely, that you could keep adding, and adding, and adding, but you could start with one PC. You can start with a single user and enlarge that to multiuser.

It's a little bit like our own company. It's an interesting story; now that I think back, it was really kind of foolhardy. When I went into Novell, having already had my experience with the mainframe/minicomputer way of running companies, I said, "We're going to run this whole company on PCs."

The problem was, the applications had to be there to support that. In the shared processor environment in the companies I had previously been involved with, the application software had been developed over 20 years. It was there. So we took the risk that the application software would develop for the PCs at a rate consistent with our growth. We elected not to get a minicomputer system, a high-risk decision now that I think about that. Because the company grew a lot faster than the application software.

If someone were to say, "I've got ten users, I want to tie them together right now and I want them to run immediately," at that time the choice would be in favor of an Altos system. That would be a UNIX-based, shared processor environment. Application software was there, dumb terminals were cheap, but there were limitations on how many you could add before it would start bogging down. So they would get bigger boxes depending on how many users you would need.

In distributed processing, most of the work that would be done in that shared processor box would now be moved out to the PC. The PC really became the application server. And the function back at the main box was a file service function, a network management function.

If you think about a limited configuration, and you were concerned about application software—I'm thinking right now about eight years ago—and talking about cost, you would clearly move in the direction of a shared processor box. The choice is now becoming more clearly in favor of distributed processing.

On the other hand, there are people who still make the choice to go to the dumb box. If you had ten users, the box itself would probably cost $10-15,000. Now you take a dumb terminal configuration and put ten dumb terminals out there—

"When I went into Novell, having already had my experience with the mainframe/minicomputer way of running companies, I said, 'We're going to run this whole company on PCs.' We elected not to get a minicomputer system, a high-risk decision now that I think about it. Because the company grew a lot faster than the application software."

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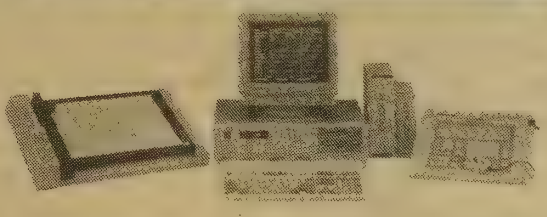

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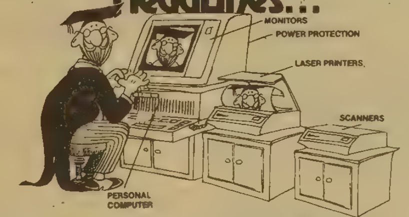

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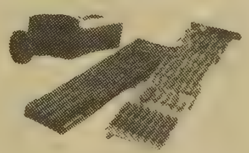

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everything else. If you have something that starts looking like a commodity product, those prices will just keep coming down, margins will keep coming down. When that happens, the people who survive in the business have a lot of capital and a lot of cheap labor, some combination of them.

I decided early on, because of my experience in the power supply business, which was supplying products to a lot of these emerging PC manufacturers (many of whom went out of business), that we were going to be in software, in some communications businesses. Perhaps some limited applications packages, which we've never done. But we're not going to be in the hardware business, because we could see that the direction was not the right way to go.

We had the advantage of the history of the previous company being a hardware and system business. Novell Data Systems made dumb terminals, smart terminals, printers, cards, whole boxes, and it just wasn't the right time to start that kind of a business. It wasn't that it wasn't brilliant to have started it, it was just the wrong time.

Is it important for Novell to strategically ally itself with anyone for the '90s?

It's hard to say, because of the strategic alliances we've already taken. We have merged with SoftCraft, which is a database management tool-set company. And Excelan, which has excellent capabilities in certain levels of protocol and operating system technology we don't have. So those were the right ones to align with.

You're looking at, say, a partnership in the larger sense; we would certainly like to be partners with all the mainframe and minicomputer people in one sense or another.

"Strategically" and "tactically" are terms which we try not to get confused. "Strategic" is the kind of relationship IBM has committed to with Microsoft on OS/2 and on the LAN Manager/LAN Server technology. When you get strategically aligned with somebody, man, you are totally committed, you know. You make a mistake in one, your future is gone. We're not likely to be big enough, or strong enough, or smart enough, perhaps, to get strategic alliances with the bigger players. But we're sure going to work hard having tactical relations with them.

They've got a market that needs serving, and we think we can help them serve it better. We'll certainly work hard to get a tactical alliance, as we have with IBM in the education market. We developed a relationship with the people in IBM surveying the so-called K-12 market. They came over to talk to us, and we could supply an answer for a problem they were trying to solve, which was networking a classroom. So we helped them develop some products around their existing products, and eventually they became a so-called vendor logo customer. And they've been buying it in various versions and selling it into their education segment of the market. We helped them solve a market issue in a particular market.

We've become popular enough so that people are asking for some kind of a tactical relationship. We're happy to do that. Whether they develop into strategic relationships which are bigger and have longer term implications... we'd rather work at the tactical level.

You were personally involved with starting LANDA (Local Area Network Dealers' Association, sponsors of LANDEX). What is the importance of an organization like LANDA and what impact has it had on the industry?

The importance of LANDA was the availability of the capability to service these work groups, and eventually move up from the work group into the higher level so that this business would really grow. It wasn't going to come down from the top. It was going to come up from the bottom, just as PCs came from the bottom ten years ago.

People who were running the MIS function didn't even want to see those things, or even hear about them. They considered that to be a threat. What's happening is that this bottom-up, coming-from-the-LAN-business, work-group-going-to-enterprise had to start from the bottom. The people who would be interested in doing that were clearly those people who were innovative and capable of making that happen.

Large companies were not interested, either at the installation level or at the user level. Too much inertia built into what they do. Those of us involved in making this decision to start it were in a manage group north of Chicago that had started to pull together and figure out how to help each other grow this business. They were all separate companies, but they were all good resellers, good technical people.

As I saw the enthusiasm and the capability that they had to feed each other information and grow their segments of the business, it occurred to me this is where this had to start. We had to have a whole lot of people doing that; otherwise the business would be under the control of the larger corporate structures to some degree, and the larger suppliers.

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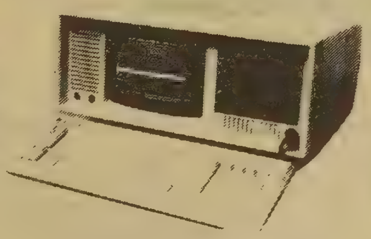

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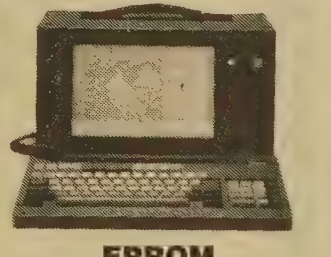

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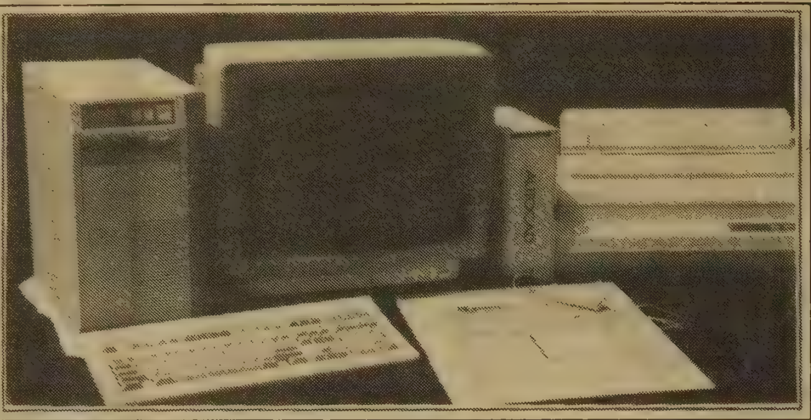

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> "Database management in larger corporate structures is very clearly still tied to the larger, shared processor environment. They can keep that the way it is, and add other things incrementally when they need them. So they're trying to take advantage of both worlds."

I felt that, for us as well as the industry, this was the right thing to do, so we decided we would start an organization.

Are you pleased with what LANDA has achieved?

Yes, it's great. I haven't been directly involved in it for over a year now. But I think the opportunity there for doing what we envisioned is huge. The quality of the people here now—they're really good people. Through this organization we could start setting standards for those dealers, provide them incentives for training and education. As the whole industry becomes more sophisticated, it requires that these kinds of people have the programs and training and certification that's necessary.

What do you foresee for LAN technology in the 1990s?

Well, LAN technology is becoming a subset of this so-called distributed processing or networked computing. But it's still the starting point for computer networking. What you will see is that the focus will be almost entirely on networked computing over the next year or two. LANs will always be there as part of the business, but the bigger business will be networked computing.

In the larger corporate structures with years of background in the existing technologies, coupling into that will, in their minds, obsolete the mentality about local area networking. It will be distributed, networked computing, whatever they want to call it, allowing people to make their choices of different functions and different operating systems and different protocols. I think that's the whole business for the future. You'll see a very limited amount of work in just a distributed processing environment, even more so in the shared processing environment.

People will make their choice to have a UNIX system over here because it's cheap, it does the job, it's fine, but it has to connect with the rest of the world. They'll make their choice there on a UNIX environment. They may make a choice, depending on how their prejudices are one way or another, in another area based on NetWare, or in another area based on OS/2 LAN Manager, OS/2 LAN Server, or they can still buy IBM equipment with MVS or a VM operating system, or a DEC with a VMS package, or an H-P. And through our Portable NetWare package we can put that on those operating systems. And LAN Manager and LAN Server will have to do the same thing. LAN Manager has its LMX, for example, which helps people port into the UNIX environment based on LAN Manager.

So there will be all of these hooks, protocol converters, and operating system interfaces that will apply. So it's really a systems developer's paradise, or a system supplier's paradise. People up here are going to become very acquainted with all of these things and become service suppliers or consultants or both. It's not going to be all one. ■

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you can buy dumb terminals these days for $350 to $400—and the wiring costs are small, you just use twisted pair, and the coupling is very cheap, you use an RS232 connect. So the cost of that is maybe ten times $500, including the cable and the connect.

Now you take a PC configuration. The PC by itself, let's use the cheapest, is maybe $600. Now the cable, if it's Ethernet, may cost $50. Plus the connects. Plus you've got to put an Ethernet card in there. That might cost $400. So now you've got almost $1,000. So you take ten of those configurations and hook them into a typical network environment like ours, and compare that to a distributed processing environment—there's a $5,000 difference. So for a guy who wants to spend a limited amount of dollars and get his job done, it may be less costly for him to go with a shared processor.

Wouldn't there be any functional advantage to having the distributed network?

The thing in our favor is if you get a configuration that handles maybe ten dumb terminals, it may run up against its capacity. Because that one box is doing all the calculations and all the work and everything. There comes a point where, say you move to a 20-user configuration, you might have to double the cost. Whereas if you go to a 10-user addition on a distributed processing environment, you may not have to change the box. So when you get to a higher level, in many cases, it will go in favor of the distributed processing environment.

But there are a lot of other things that are more important to the user. And that is the flexibility that a distributed processing environment gives you. More application software is becoming available now. There are so many, many different varieties of it, because it starts off with a guy developing a specific application package for a specific industry for a single user. It starts that way, then the guy who starts out as a single user in a business wants to add four or five people into the environment. And he wants to share files. So that starts a whole new segment of the business.

I would say the application of it, the commodity orientation of the hardware, getting cheaper and cheaper all the time, more power being built at the desktop so that a guy can handle a whole lot of functions at once, and still network him—those are the things that keep driving it.

> **"We decided we had to exist and coexist in the mainframe and mini business very early on. Because we really thought that the mainframe and mini people would get interested in the LAN business if it grew satisfactorily."**

In the early days, Novell was primarily concerned with networking DOS and CP/M machines. Now you network everything up to minis and mainframes. Can you explain that evolution?

That's hard because it was so evolutionary, really. We sort of decided we had to exist and coexist in the mainframe and mini business very early on. Because we really thought that the mainframe and mini people would get interested in this business if it grew satisfactorily.

How we would do it wasn't quite clear, but it became somewhat clearer in about 1985. I was still active to some degree in System Industries where I had been the president; I was on the board of directors. So it occurred to us that eventually we could become a so-called application under those systems, so we could coexist as an "application" under mainframe and minicomputer operating systems.

We started to think about it at that point with regard to DEC. I had made an investment in another company in the Bay Area that had a lot of mainframe technology and understanding. They were actually doing products that fit inside the mainframe operating system. We saw then that we could make a fit through the micro world with the LAN technology into the mainframe/minicomputer world. So we started to work on it in late 1985.

You mentioned in your speech to LANDEX today that the LAN industry must stay at the cutting edge, always moving forward. What is the

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cutting edge right now?

The anticipation of higher performance capability at the desktop, with more and more application packages for the small user. For the large user, it's the flexibility that the PC and the network environment have to tie a lot of things together.

Hewlett-Packard has just said they're not sure what's happening between the minicomputer business and PCs, because more people now are moving toward the PCs faster than they had anticipated. The reasons they're moving there are that we, along with other people, are now offering the opportunity for them to move to the flexibility the PC offers, and still tie back into the mainframes and the minis that a large corporate structure thinks are sacred. Because they control the databases, which is very sacred. Database management in larger corporate structures is very clearly still tied to the larger, shared processor environment. So the fact is they can keep that the way it is, and they grow these other things and add incrementally when they need them. So they're trying to take advantage of both worlds while still trying to preserve the security of the mainframe, so-called glass-house environment.

What does Novell offer that distinguishes it from other LAN companies?

Well, if you look at 3Com and us together, we started out believing we had to be a software company. We had hardware at the time, but we said, "Look, we're going to buy other people's hardware and sell it with our software just to promote the market. And then eventually we'll let the customer buy that hardware directly from the supplier, and we will simply sell software."

They started off really, I think, with a very high technology base, the Ethernet capability, making hardware, with less focus on software. And they've moved forward in making their own server boxes and their own desktop PCs; really, they're a total system supplier, much like Hewlett-Packard.

If you look at the composition of their business right now, about 80 to 85 percent of their business was hardware-based business. And about 15 to 20 percent was software, service, and other. Now we're exactly the opposite. We have about 80 to 85 percent of our business in software, even though we just merged with Excelan, which reputedly has a whole lot of hardware. But they're a small part of our business. Put those together even now, it's 85 percent software and 15 percent hardware and other services.

The most difficult place now to compete will be in the hardware business, because most hardware is based on commodity-oriented chipsets. All the PCs tend to look alike. A lot of people make them. And the Ethernet cards, a lot of people make those because the technology is very well understood. It's an absolutely predictable business in terms of its prices and margins and

"People now are moving toward the PCs faster than mini and mainframe vendors had anticipated. The reasons they're moving there are that we, along with other people, are now offering the opportunity for them to move to the flexibility the PC offers, and still tie back into the mainframes and the minis that a large corporate structure thinks are sacred."

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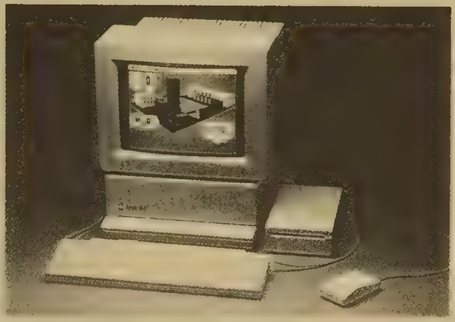

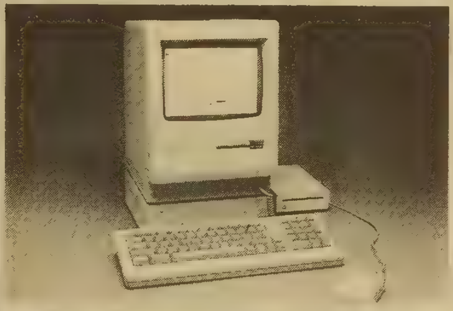

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The Bondwell B300

By Ed Kahn

> **The Bondwell is the only computer I've seen that has a switch on the keyboard that allows you to turn off the hard drive. This is a good energy saving device. Furthermore, the Bondwell can be set up to turn off the hard drive automatically after a period of non-use.**

In a market crowded with competing laptops, it is possible to get just about anything you want. You can choose from briefcase computers weighing as little as four pounds, all the way up to machines approaching the luggable sewing-machine-sized units of yesteryear. You can have hard disks or floppies, stripped-down units, or powerhouses approaching the capabilities of the most powerful desktop units.

With so many choices available, it is difficult to understand the appeal of some units. What market are the manufacturers targeting? An example of a machine that falls between the cracks for me is the current Bondwell entry.

It performs flawlessly, but these days that is not enough. A year or two back, I would have highly recommended the Bondwell B300, but with so many entries in the under-$3,000 class, a machine has to have something that really calls out. This unit, despite a number of fine features and a few unique twists, nevertheless falls short in a number of areas. If, however, you find a great buy in this unit, there is no reason to shy away if what you want is basic computing power.

The B300 is built around an 80286 processor, which means that it is a reasonably fast unit—9.8 on the Norton scale. It weighs in at 15 pounds and has a compact design. The 20 Mb hard disk is reasonably quiet. You are advised to run a disk parking utility at the end of a work session if you plan to move the computer. Most of the competition has a self-parking hard disk to avoid this inconvenience.

On the other hand, the Bondwell is the only computer I've seen that has a switch on the keyboard that allows you to turn off the hard drive. This is a good energy saving device. Furthermore, the Bondwell can be set up to turn off the hard drive automatically after a period of non-use. This feature is helpful when using the unit in the field—especially for applications where it is possible to work for fairly long periods without having to access the hard disk. If you leave the hard disk off and do a save, the disk is automatically awakened for completing the task. Afterwards you can manually touch the HD button, which tells the drive to go back to sleep.

Another unique feature of this unit is its battery program, which tells you how much charge is left in the battery. When you call up the battery program, you can also turn the hard disk automatic shutdown feature on or off, as well as the sound warning beeps. Bondwell's program stays up to date, even if you move back and forth between battery operation and AC power.

A similar program, *Battery Watch* ($39.95), is available from Traveling Software. While it is limited to keeping you up to date on your battery's condition if you use any portable on battery power most of the time, *Battery Watch* is a must. It will work on most battery-operated portables and save you lots of worry, as well as the inconvenience of running out of power at the wrong moment.

The Ni-Cad batteries in the B300 can power the computer for up to three hours of use, but this time will be significantly reduced depending upon how much you use the hard disk and the backlighting for the LCD. A switch on the side of the unit allows you to turn the backlighting off and on. In many lighting situations, there is no appreciable improvement from using the backlighting. In substandard lighting, however, the backlighting provides an extremely clear display. Many computers I have tested really are impossible to operate without backlighting, but the Bondwell is happily the exception. While the built-in display is a clear electroluminescent backlit screen, the computer offers only CGA compatibility when you connect to an external monitor. For some graphics this is OK, but for text, I can't work with CGA resolution for long.

One of the strong points of this computer is its attention to energy conservation, permitting you to use it on battery for a reasonable length of time. Although you can use the B300 for up to three hours on battery, it takes twelve hours for a full recharge. While this is not uncommon, it does limit your ability to use this machine exclusively as a battery-powered unit, as there are no provisions for changing batteries in the middle of a work session. The instruction manual does not discuss changing or replacing the batteries, but does advise against leaving the AC adapter connected to the computer all the time.

In general, the B300 has the features you want. The unit comes with 1 Mb of RAM and is expandable to 1.5 Mb. A built-in 1200 baud modem is standard. The modem works perfectly, but is half the speed of most of the built-in modems that are included in competing models. Furthermore, I rely heavily on a modem speaker, a feature this unit lacks. Fortunately, however, the modem does allow you to listen on a telephone handset to monitor the progress of the connection. The computer comes with a se-

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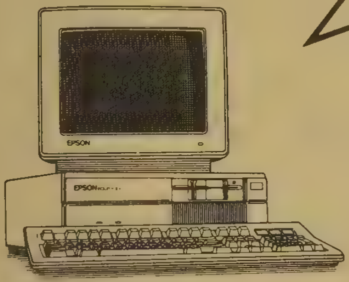

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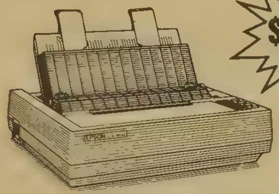

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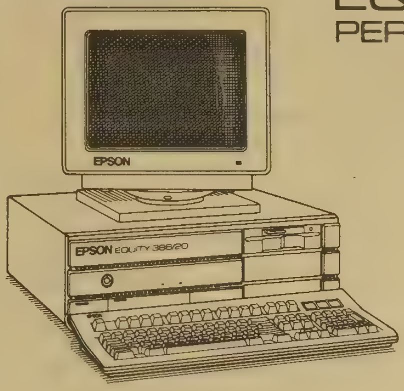

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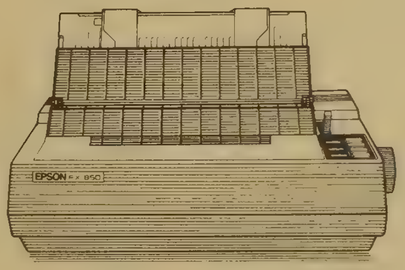

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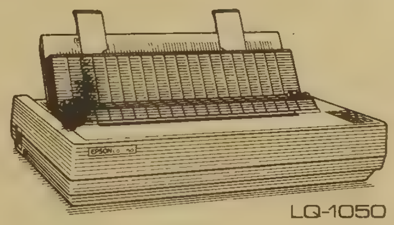

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rial port in addition to the modem. A switch on the side allows you to set the modem as COM1 and the serial port as COM2 or visa versa. This will allow you to accommodate any software that insists on the serial port or modem being COM1.

The keyboard of the B300 is complete and compact. The standard typing keys are in the expected places. The control key is located to the left of the A key. In the old days, I cursed computers that did not have the control key located here, but now I'm not so sure. Over the last year I have seen the wisdom of having the control key located on the bottom row, and in two places so it can be accessed with either the right or left hand. While I cannot really fault Bondwell for putting the control key where they have, it is becoming less and less common.

They have included a full numeric keypad, although it is made up of small keys. Nevertheless, I really appreciate it when laptops find some way of providing a separate numeric keypad. The more common practice—providing embedded keypads in which letter keys double for number keys when the NumLoc key is switched on—always leaves me wishing for an honest-to-goodness numeric pad that is always there. Bondwell provides this, as well as separate cursor control keys. In this respect, the keyboard wins high marks.

But the placement of some of the other keys feels awkward to me. The delete key, for instance, is located near the center of a row above the standard keyboard. And while I don't use function keys 11 and 12, a buyer should be aware that these keys are not provided.

My main objection to the keyboard, however, is that I have a hard time typing accurately on the unit. There is no question that this is very subjective, but some computers provide keyboards that I can really work well on for long periods of time, but the Bondwell is not one of them. This limitation is made worse by the absence of a port that will allow you to connect a keyboard of your choice. While I have no reason to expect computers to provide such an alternative, it is always a plus because the selection of a keyboard is bound to be subjective and the presence of this port offers a user the ability to select a favorite keyboard.

The design of the computer allows a fair amount of expansion. A 1.44 Mb 3.5" disk drive is included. A port on the back of the machine allows you to connect an additional drive—either 5.25" or 3.5". Bondwell does not sell these additional drives, but has wisely designed the system so anyone can easily add a generic drive. The connector will work with any IBM compatible free-standing drive. Bondwell has also designed the system so a user can install an 80287 math coprocessor. A carrying case comes with the B300.

When I began to review this unit, I phoned to ask for a listing of available options and their prices. I was told that there are no options—everything is either included or available from third party vendors. This is refreshing in that you can shop for competitive prices on the options you require.

The computer is ready to go when you get it. But there is a setup program that allows you to configure the system to suit your needs and accommodate any options you may install. The program is accessed by pressing Esc along with the Control and Alt keys. From within this program you can tell the system how many drives you have, how much memory is installed, and the time and date.

The Bondwell B300 comes with MS-DOS and GW-BASIC. In addition to the software and appropriate manuals, there is a user's manual, that has all of the information you will need to operate the computer. Although the manual is small, it does have an appendix that contains pinouts for all of the ports, as well as other technical information that might come in handy.

Although this is a portable computer, Bondwell forgot to build in a handle. While this does not affect the operation of the unit, it makes it awkward to carry it or even take it in and out of the carrying case. ■

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Resources:

Battery Watch $39.95
Traveling Software
18702 North Creek Parkway
Bothell, WA 98011
(800)343-8080

Bondwell B300 $2,995.00
Bondwell Industrial Company, Inc.
47485 Seabridge Drive
Fremont, CA 94538
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A Pair Of Portable Printers

While the laptop market has filled to bursting with wonderful lightweight machines of every description and capability, the portable printer market has lagged behind. There have been lightweight units that were designed for portability and battery operation, but the marketplace has not been filled to overflowing. Nevertheless, there are several credible models now available.

Toshiba ExpressWriter301

The Toshiba ExpressWriter301 ($489) offers 24-dot letter quality printing in a compact four-pound package. The unit combines the dot matrix concept with thermal transfer to offer a quiet printer that works on any paper. Ink is supplied by a snap-in ribbon (two for $9.00). To date the ribbon comes only in black. The printer is powered by either the built-in rechargeable NiCad batteries or the supplied AC adapter, which also recharges the batteries. The printer will operate for about an hour on a full charge.

In many ways the ExpressWriter is an extremely versatile machine, offering five built-in fonts and both Toshiba and Epson LQ printer emulation. The printer will operate at either a high-speed mode of 60 characters per second or a standard mode of 42 cps. Like all Toshiba products, the 301 comes with excellent documentation and a worldwide one-year warranty. An optional carrying case ($39.00) is available.

I could be happy with this printer for most of my work except that it does not offer either a tractor or pin feed option. This limits the user to feeding in individual sheets of paper. While this may serve well for many users, those who need to be able to use formfeed paper will have to look elsewhere.

Kodak Diconix 150 Plus

The Kodak Diconix 150 Plus ($499.00) printer uses an ink jet technology to achieve its high print quality and nearly silent operation. It, too, works on any relatively smooth paper, although if you want truly fabulous results you should use the special ink jet paper that Kodak and other vendors sell. This printer is a reworking of the popular Diconix 150 and incorporates a number of enhancements that make it capable of serving as a primary as well as portable printer. It is silent and fast: 180 characters per second.

The printer is small in size as well as weight. At 3.1 pounds, it is easily transported. And while it can take standard size formfeed paper, it is also easy to feed in single sheets and even labels. In addition to the highest quality print, an operator control panel allows you to choose either near letter quality or draft quality. These different print qualities work at different speeds and use different amounts of ink.

The printer comes with both a comprehensive operator's guide and a detailed reference manual. Dip switches on the side determine whether the printer will operate in IBM or Epson emulation. In either case, it is easy to make this printer work with all software.

Ink cartridges cost $13.95 each, and a carrying case is available for $29.95. A one-year warranty comes with the printer. A parallel port makes it a literal snap to connect to most IBM compatible computers.

Resources:

ExpressWriter301 ($489.00)
Toshiba America Information Systems, Inc.
9740 Irvine Blvd., Irvine, CA 92718
(714)583-3000

Kodak Diconix 150 Plus ($499.00)
Eastman Kodak Company
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Personnel Policy Expert

Considering And Defining Your Employee Policies

By Woody Liswood

For many of us, microcomputers are useful tools to help us get our work done. I suspect that the most commonly used tool on a microcomputer is a word processor, followed by spreadsheets and database software.

However, another large area of microcomputer use is starting to mature: programs filling specific functions for specific industries or professions. A while back we reviewed *Legal Ease,* which provided multitudes of forms that you could use to help you run your life.

Personnel Policy Expert
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Personnel Policy Expert is also in that genre of program. It allows you to create a personnel handbook you can use with your employees. You don't need to spend hundreds or thousands of dollars hiring a Human Resource Consultant to do it for you, nor do you need to find someone with years of experience to head your Personnel Department just to get the handbook done.

On the other hand, if you *are* an experienced Human Resource Professional, you know what a pain it is to write, edit, and update the smallest of employee handbooks. And many times you wish that you had someone to discuss the options with when you consider creating or changing one of your policies. *Personnel Policy Expert* would help you in that way. If you just happen to be a high-priced Human Resource Consultant (or even a medium-priced one), then *Personnel Policy Expert* might just help you appear to have significantly more resources than you do, and allow you to create and maintain employee handbooks for your client companies in a very cost-effective and profitable manner.

A major consideration when choosing a program that gives you advice and helps you make decisions about something as sensitive and valuable as your employees is the qualifications of the program's authors. *Personnel Policy Expert* relies on two folks, Jack McGervey and Stephen Kellerman, to provide professional guidance from this advanced expert system.

I don't know Mr. McGervey personally, but I do know Steve Kellerman. I have been in Human Resources for over 20 years myself, with the last eight or so as a consultant. Kellerman was one of my contacts when he worked for the Federated Employers of the Bay Area, dispensing the same help now available from the program. In my opinion, his advice was good then; after reading a number of the policies written by *Personnel Policy Expert,* I'd say the advice is good now.

Personnel Policy Expert allows you to create a personnel handbook. You don't need to spend hundreds or thousands of dollars on hiring a Human Resource Consultant to do it for you, nor do you need to find someone with years of experience to head your Personnel Department just to get the handbook done.

An interesting, and important, disclaimer is built into the program's documentation. While we are all used to reading about software that is not warranted to work, only run, this disclaimer is worth quoting:

"*Personnel Policy Expert* has been designed to write personnel policies for employers throughout the United States, based on California labor laws. While California laws are among the most stringent of any state, local and state labor laws vary significantly.

"It is the responsibility of the employer to ensure that the personnel policies adopted comply with all applicable laws. This software is not intended to be a substitute for legal advice nor provide legal guidance of

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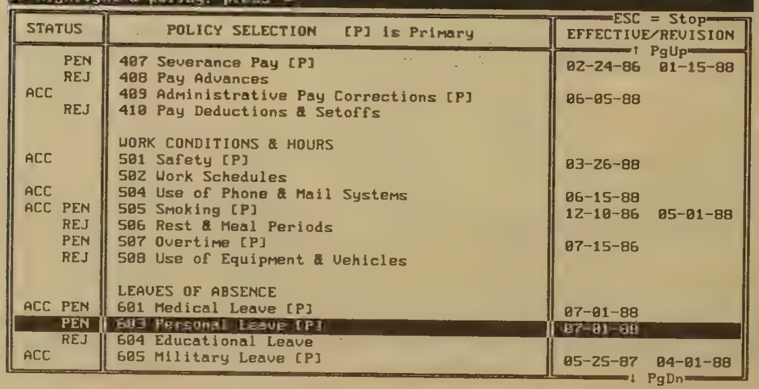

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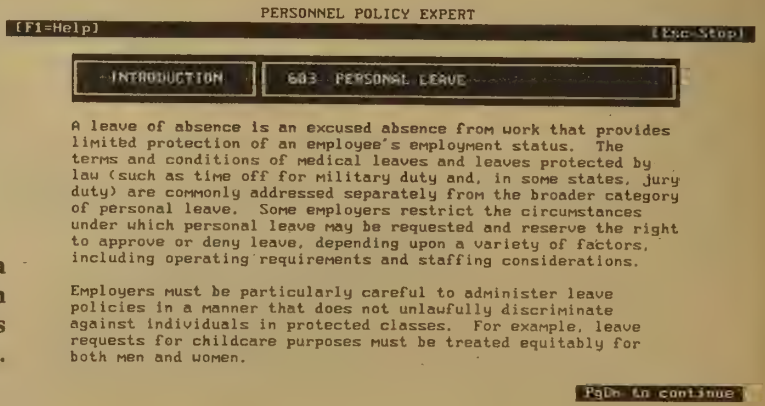
CREATE:  Enter the policy number:
or highlight a policy, press ↵

STATUS      POLICY SELECTION   [P] is Primary        ESC = Stop
                                                  EFFECTIVE/REVISION
                                                        ↑ PgUp
    PEN   407 Severance Pay [P]                   02-24-86  01-15-88
    REJ   408 Pay Advances
ACC       409 Administrative Pay Corrections [P]  06-05-88
    REJ   410 Pay Deductions & Setoffs

          WORK CONDITIONS & HOURS
ACC       501 Safety [P]                          03-26-88
          502 Work Schedules
ACC       504 Use of Phone & Mail Systems         06-15-88
ACC PEN   505 Smoking [P]                         12-10-86  05-01-88
    REJ   506 Rest & Meal Periods
    PEN   507 Overtime [P]                        07-15-86
    REJ   508 Use of Equipment & Vehicles

          LEAVES OF ABSENCE
ACC PEN   601 Medical Leave [P]                   07-01-88
    PEN   603 Personal Leave [P]                  07-01-88
    REJ   604 Educational Leave
ACC       605 Military Leave [P]                  05-25-87  04-01-88
                                                        ↓ PgDn
```

Personnel Policy Expert allows you to select from a wide range of workplace issues.



```
                    PERSONNEL POLICY EXPERT
[F1=Help]                                                 [Esc=Stop]

     INTRODUCTION      603  PERSONAL LEAVE

A leave of absence is an excused absence from work that provides
limited protection of an employee's employment status.  The
terms and conditions of medical leaves and leaves protected by
law (such as time off for military duty and, in some states, jury
duty) are commonly addressed separately from the broader category
of personal leave.  Some employers restrict the circumstances
under which personal leave may be requested and reserve the right
to approve or deny leave, depending upon a variety of factors,
including operating requirements and staffing considerations.

Employers must be particularly careful to administer leave
policies in a manner that does not unlawfully discriminate
against individuals in protected classes.  For example, leave
requests for childcare purposes must be treated equitably for
both men and women.

                                                PgDn to continue
```

Once you've selected a topic, in-depth information appears on its ramifications.

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any kind whatsoever. Before adopting or implementing any personnel policies, all employers should have them reviewed by experienced legal counsel."

Using The Program

The program is very easy to run. Just run the install program and answer the questions. Then run the program, look at the list of topics, pick a topic you want to consider, read the policies on screen, and consider alternatives and other discussions about the policies. When you are done, you can select that policy to be added to your handbook. The file can be printed to disk; you can then add the selected information to a word-processor document so that you can print it with your chosen formatting and other changes. (*Personnel Policy Expert* will keep the files and print them for you, but I found that I would rather keep the handbook as, for example, a *WordStar* file and then use the *WordStar* formatting commands to make the handbook look nice when printed with my H-P LaserJet II.)

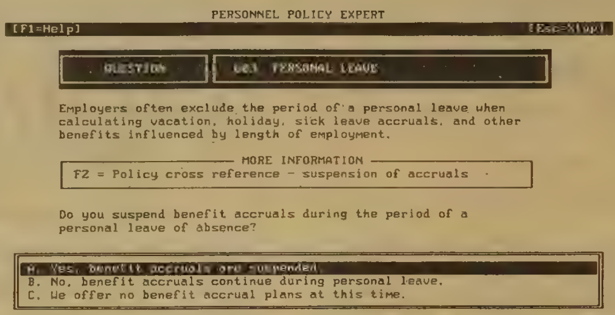
Personnel Policy Expert also lets you keep a table of contents for the policy book you are creating. You can also have pending policies—those which you are considering, but which you have not yet added to the book. The latest version of *Personnel Policy Expert* will let you print a single policy, all of your policies, or a select group of policies, as you need them.

When you are examining a policy for potential inclusion in your handbook, a series of prompts will guide you through deeper and more insightful discussions about its effects and implications.

You can keep the policy handbook online in your computer. Rather than printing out the handbook, you can let every employee peruse it on screen. To accomplish this, you can also password protect functions of the program so that only those policies in your manual are available on screen. Also, if you have policies that were not already internal to *Personnel Policy Expert*, you could add those to your on-screen versions.

When considering whether you want this type of program, you should consider that written and published policies are valuable in working with your employees. They leave little doubt about those things that your organization considers important. Communication with your employees is important, and may save you lots of grief if you do take actions about a "policy" item and the courts find that you never did write down those policies.

Lastly, an expert system like *Personnel Policy Expert* would not be much good unless it were updated regularly. *Personnel Policy Expert* is updated from time to time as new policies are added; existing policies have new discussions added or are change as the case law changes about the individual subject areas.



```
                    PERSONNEL POLICY EXPERT
[F1=Help]                                                  [Esc=Stop]
    QUESTION     003  PERSONAL LEAVE

    Employers often exclude the period of a personal leave when
    calculating vacation, holiday, sick leave accruals, and other
    benefits influenced by length of employment.

    ---------------------- MORE INFORMATION ----------------------
     F2 = Policy cross reference - suspension of accruals

    Do you suspend benefit accruals during the period of a
    personal leave of absence?

 A. Yes, benefit accruals are suspended.
 B. No, benefit accruals continue during personal leave.
 C. We offer no benefit accrual plans at this time.
```

PPE does a thorough job of exploring those obscure issues you might not have considered.

Over 50 policy areas are currently covered in *Personnel Policy Expert*, including Access to Personnel Files, Performance Evaluations, and a form indicating that the employee has received and read the handbook.

All in all, this is a program which might solve many of the problems the managers of small- and medium-size businesses have in understanding and developing a consistent and sound set of human resource policies for their company. (Knowledge Point, 1311 Clegg Street, Petaluma CA 94952, 707/762 - 0333.) ■

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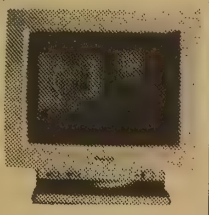

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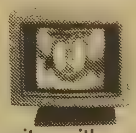

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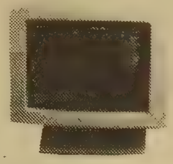

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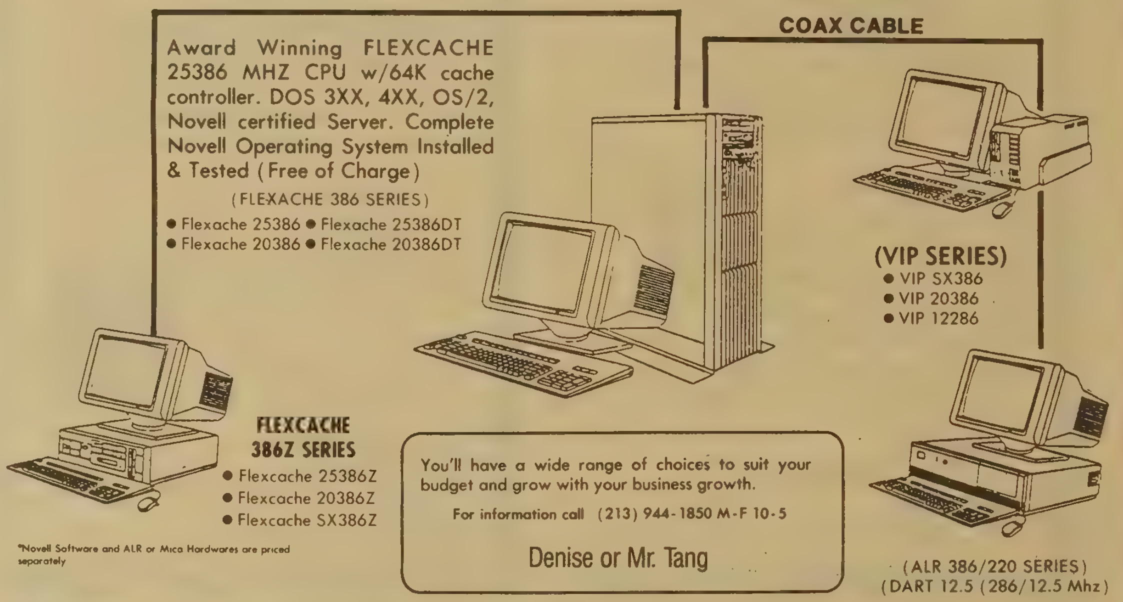

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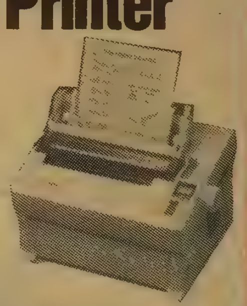

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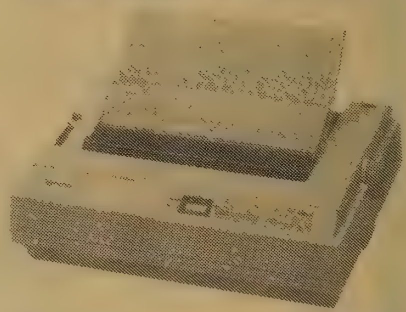

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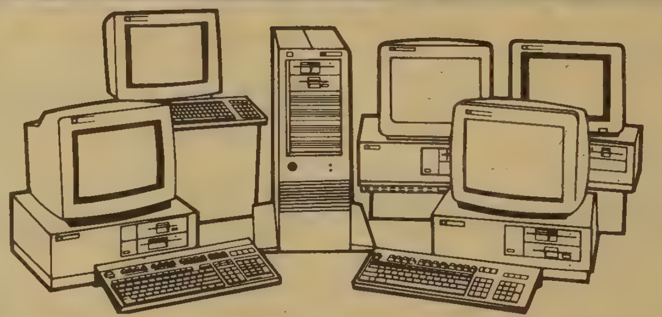

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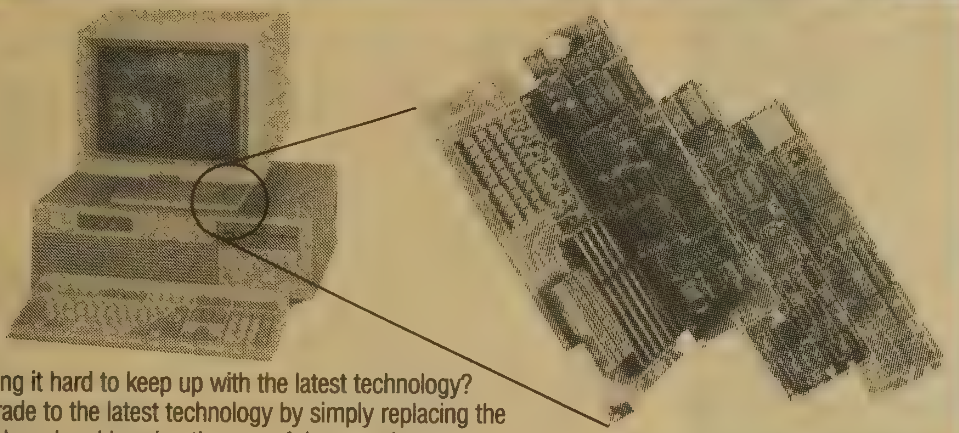

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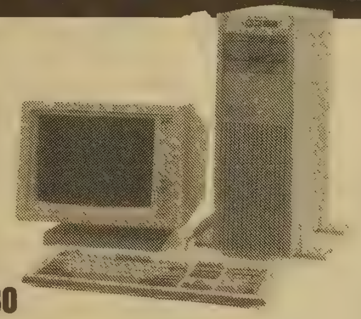

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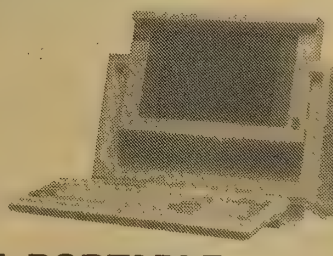

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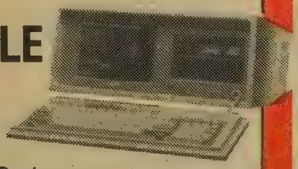

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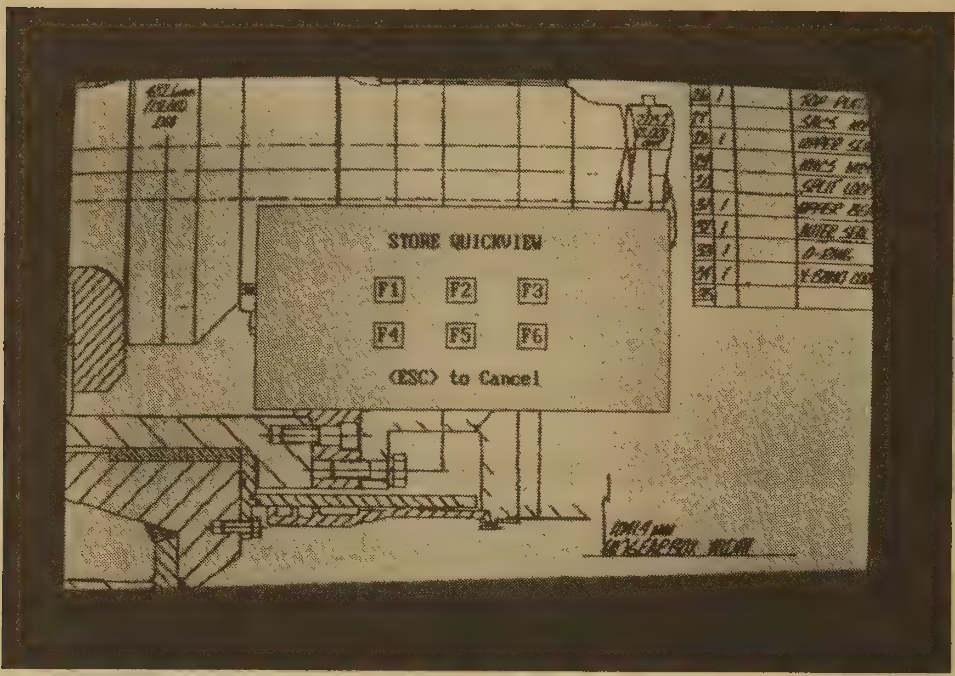

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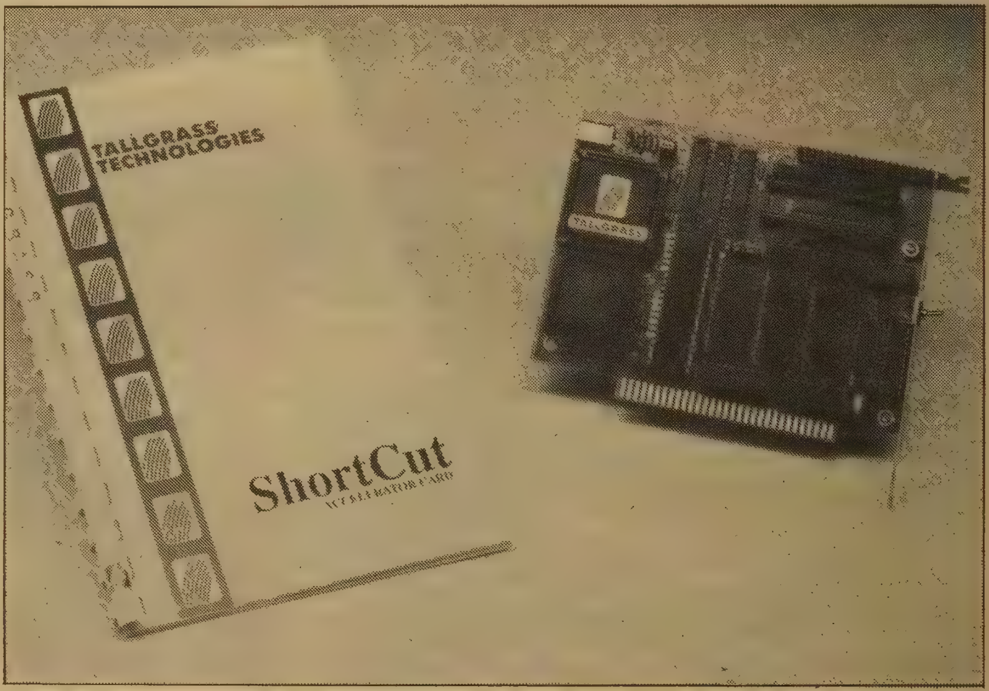

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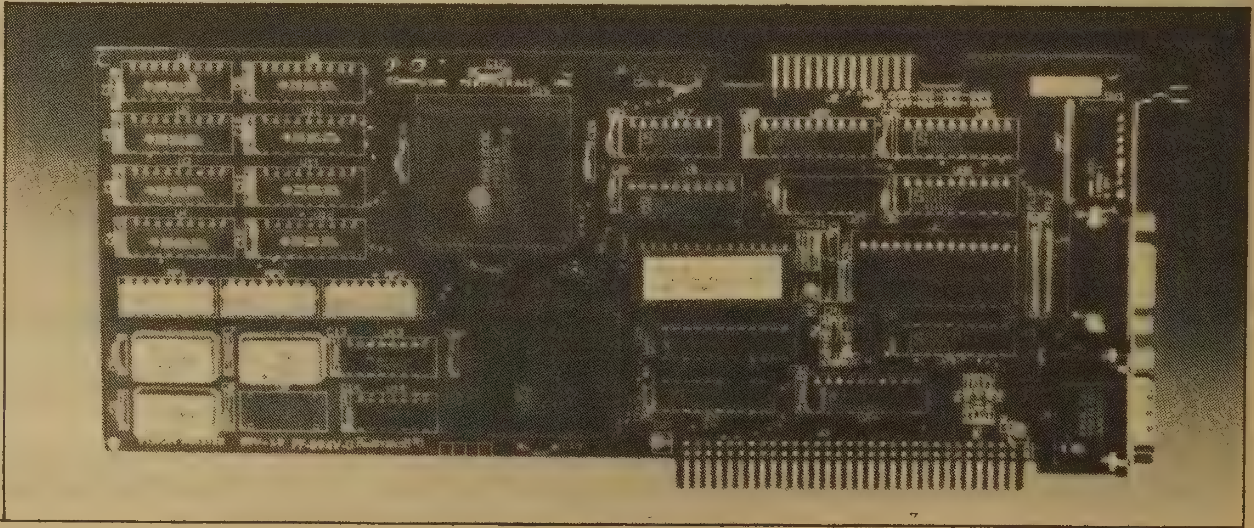

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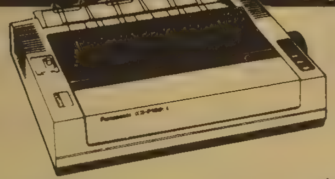

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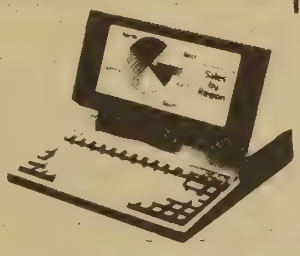

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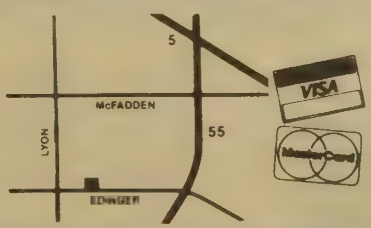

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UNIX

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Fear Of UNIX:

Lex and Yacc For Humans

"Lex" and "yacc" are two genuinely obscure UNIX utilities. It's a safe bet that most UNIX users are unaware of how these programs are used and what they do. This lack of awareness by itself really isn't a problem: most people don't need to use either lex or yacc to get their work done. The real problem is fear.

People are afraid of lex and yacc. They are afraid because the names are strange. They are afraid because they've heard the names but don't know what the utilities are for. They are afraid because reading the manual entries for lex and yacc doesn't really help. They are afraid because no matter how comfortable they are with UNIX, there will always be some authority figure around to remind them of their ignorance with an offhand "Yes, but what about lex and yacc?" They are, finally, afraid because saying these names out loud repeatedly could permanently impair one's diction.

Fortunately, fear is relatively easy to dispel.

Lex And Yacc: What Are They?

Lex and yacc are tools used by people who write programs in C: these tools do nothing more than help the programmer manage input processing in a program. They provide a way to describe what kind of input a program will accept, and they structure this input in such a way that the program can use it efficiently.

To understand what lex and yacc do, it is necessary to understand a thing or two about programs and input. Not all programs require input: some programs contain all the information needed to do their intended job. The "sieve" program that finds and prints prime numbers is an example of a program that needs no input.

Other programs expect input but have no need to analyze the input they are given. The UNIX "cat" program simply copies its input to its output. All cat needs to know about its input is whether or not the most recent attempt to read input returned an end-of-file token. Apart from this, cat reads anything it is given and copies it to an output channel.

Still other programs rely on input for information from which to make critical decisions about the program's behavior. Calculator programs, such as the UNIX "bc" program for example, expect input that contains both data and instructions about how that data is to be manipulated. Bc can do nothing until it sees properly formatted input with both numbers and arithmetic operators.

The rules that describe acceptable input for programs like bc actually make up a miniature language that controls the program's behavior. Most UNIX programs assume that their input will come from a user working at a terminal, and so the language for controlling the program needs to be something a user can memorize as well as something that's easily entered from a keyboard.

But a language that satisfies the user's requirements is not likely to be very efficient for the CPU on which the program must run. The user would prefer to enter text, but the computer demands that the input be expressed in symbols that fit into memory agreeably with known data types (such as character, integer, or floating point number) assigned to any constants the user entered.

Lex and yacc provide the means for translating the user's input into a format the program can work with. This translation happens in stages. The first stage is a straightforward left-to-right linear scan of the text the user entered. Scanning is also known as "lexical analysis," and "lex" is simply a device for creating lexical analyzers to be incorporated into programs.

The second stage involves checking the syntax of the scanned input to be certain that it complies with the rules set up by the programmer. These rules make up the program's "grammar" (this is a language after all), and checking the syntax of the input is usually called "parsing." Yacc is a tool for building parsers. Because the business of translating a program from one language to another is often called "compiling" (particularly when the target language is a machine language), yacc could be thought of as a compiler to build compilers; indeed, the name "yacc" is an acronym for the tortured phrase "yet another compiler compiler."

A lexical analyzer's scan of user input is similar in some respects to what the utilities "grep" and "awk" do. The analyzer looks through the input for patterns or "regular expressions" that are significant for the program, and when it finds them, it does whatever the programmer specified for the expression encountered. Typically, the lexical analyzer will strip out the characters like blank, tab, and newline, which make the input readable to the user. It also translates any keywords, identifiers, and constants into tokens that are understandable to the parser.

The tokens produced by the initial scan of the

> **People are afraid of lex and yacc. They are afraid because the names are strange. They are afraid because they've heard the names but don't know what the utilities are for. They are afraid because no matter how comfortable they are with UNIX, there will always be some authority figure around to remind them of their ignorance with an offhand "Yes, but what about lex and yacc?"...**

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A language that satisfies the user's requirements is not likely to be very efficient for the CPU on which the program must run. Lex and yacc provide the means for translating the user's input into a format the program can work with.

user's input are passed to the parser. The parser does a syntax check and organizes the input hierarchically: the various operations requested by the user are put together in a tree-like structure that establishes the sequence in which things are to be done. This has a lot in common with the diagramming of sentences we all did in grade school, but the structure the parser produces is something that can be handed over to the CPU to be executed.

Using Lex And Yacc

The mechanics of using lex and yacc are relatively simple. Both these programs are code generators: they take as input specification files provided by the programmer, and they produce the necessary C source code to do parsing or lexical analysis. The C code produced by lex and yacc is considerably larger than the specification files: even relatively simple specifications will produce 300 to 500 lines of C when run through lex and yacc.

Lex and yacc specification files have the same general format consisting of three sections. The first section contains declarations of variables that the rest of the program will need. This section follows the conventions used by C for variable declarations. The second section contains the rules that govern what the input should look like and what action to take when any particular rule is triggered. The last section contains the C source code for any customized routines the user wants called during the analysis of the program's input.

The rules section of a lex specification file describes the regular expressions that are significant to the program and what to do when each is encountered. Unfortunately the notation used for regular expressions in lex is different from that used in either grep or awk. The rules portion of a yacc specification file contains the grammar the program will recognize, and designing an unambiguous grammar can require considerable finesse.

Once the specification files are prepared, the programmer runs yacc and lex giving each the name of the appropriate specification file. Lex reads its specification file and produces a file named "lex.yy.c". Yacc puts its newly generated C code in a file named "y.tab.c". The C compiler is then used to transform y.tab.c into something useful. The source code produced by yacc and lex uses a few specialized input processing routines that are stored in separate libraries, and these must be linked in when lex.yy.c or y.tab.c are compiled.

The mechanics of using lex and yacc are relatively simple. Both these programs are code generators: they take as input specification files provided by the programmer, and they produce the necessary C source code to do parsing or lexical analysis.

As you might imagine, concise examples of the proper use of lex and yacc are in short supply. However, if you're sufficiently free of anxiety and want to practice using them, Brian W. Kernighan and Rob Pike have included an excellent illustration of how to use lex and yacc in chapter 8 of their book *The UNIX Programming Environment* (Prentice Hall, 1984).The rest of us will be right here working on our diction. ■

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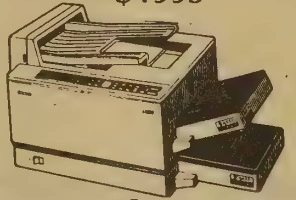

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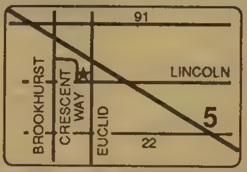

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LANs

BY WAYNE YACCO

Issues In Mainframe Connectivity

Whatever your present involvement with LANs, in the future, you'll probably be turning to them for an ever-increasing portion of your regular data requirements. That, at least, is what the vendors or microcomputer databases are preparing to support. However, they have some substantial obstacles to overcome along the way.

Some, like Oracle, have traded on the ability to access data across hardware platforms all along. Now vendors are seeking to provide the ability to access data, not only across hardware and operating systems, but from the files of other applications.

Access to the data, which is essentially the cerebral cortex of the enterprise, is every bit as touchy as brain surgery. There must be assurances that the patient will not only survive but that its personality will remain intact. Entrusting this to department managers or other users is about as likely as having a chiropractor operate on the central nervous system.

New and existing applications with familiar interfaces like the *dBASE* programming language, or emerging standards such as SQL, will provide the ability to work with the files on mainframes and minicomputers as well as to manage distributed LAN-based databases.

That seems like a worthwhile endeavor. After all, what we have now is akin to a Babel of data-management tongues. There aren't many good ways to find or use all of the information that's already in storage. What we need, as users, is a simple way to ask for answers and automatically access whatever resources exist that can help us. Data management should provide a functionality something like the expertise of a research librarian who knows where all the books are and what each contains.

Ashton-Tate, Microsoft, and Sybase have joined in one of these efforts to produce *SQL Server*. This application combines a basic database engine developed by Sybase, OS/2 LAN Manager connectivity provided by Microsoft, and Ashton-Tate's *dBASE* front end, distribution and sales efforts.

Jan Brundine, Ashton-Tate's Director of Connectivity Products, described the genesis of this evolution as beginning with "cooperative processing." That's A-T's term for becoming a member of the MIS design team. Until that happens, there isn't much hope of having real access to mainframe-based data, let alone enterprise-wide data.

And while it might seem that the solution is as simple as the MIS manager electing to buy a copy of a product like *SQL Server*, that alone isn't the answer. Even when the technology exists to access distributed data, including mainframe data, there are questions of internal control and data integrity that must be resolved before the technology can be implemented in a corporate environment. These are more substantive issues than mere politics (although politics and personalities will certainly enter into the formula in a significant way).

Access to the data, which is essentially the cerebral cortex of the enterprise, is every bit as touchy as brain surgery. There must be assurances that the patient will not only survive but that its personality will remain intact. Entrusting this to department managers or other users is about as likely as having a chiropractor operate on the central nervous system. MIS insists on absolute controls that can't be circumvented for the expedience of a thoughtless user.

So A-T and the others are working to establish new products that are viewed, as Brundine puts it, as a "valid enterprise-wide processing tool and member of the design team." These products include data validation, audit trails, privilege levels and security features that can protect data from misuse and abuse. Even with the precautions in place, there will be some cultural resistance before these new applications are accepted, simply because, until they have proven themselves, placing faith in them entails a certain amount of risk.

Gupta's Planet Library

SQL is seen by many as the forthcoming standard for accessing distributed data. To increase its ability to access data across platforms, Gupta is opening up its *SQLBase* database server with the help of Planet Software.

The Planet Library for *Clipper* allows users of the popular *dBASE*-language compiler to include SQL commands that access *SQLBase* and, through Gupta's *SQLGateway*, *DB2* on mainframes. The library takes advantage of *Clipper's* user defined function capability to generate SQL commands for the *SQLBase* API (application program interface). The *SQLGateway* employs an essentially identical API.

If you're looking for hard-to-find LAN services or special training you should know about LANDA (LAN Dealers Association).

Since *SQLBase* can convert files from *dBASE* and *R:BASE* (from ASCII) this gives *Clipper* programs SQL access to a lot of data. And next year, Gupta will introduce an *SQLGateway For Oracle*, giving PC workstations access to minicomputer files as well.

There are other Planet libraries in the works. Both the Fox and *R:BASE* compilers will eventually have their own versions. The *R:BASE* version is already being demonstrated alongside the *Clipper* library on tour.

Gupta itself began selling the *Planet Library For Clipper* in mid-August. It was formerly sold exclusively by Planet Software; Gupta's push, including a road show, should give the product some quick market penetration.

LANDA

If you're looking for hard-to-find LAN services or special training you should know about LANDA (LAN Dealers Association). Consisting mostly of local dealers who specialize in LANs, LANDA is the organizer of the LANDEX trade shows and plans to begin a certification program. It also publishes a membership directory that includes all of its member dealers and manufacturers.

Directory listings are arranged by state or Canadian province (with a small international section) and indexed by manufacturers, distributors, resellers, and individuals. Each entry provides the company name and address, contact person, type of business, number of years in the field, number of employees, product lines carried, training offered, maintenance capabilities, and any special services performed. It is available to non-members for $90. (LANDA, 312/279-2255, 360 W. Butterfield Rd., Suite 260, Elmhurst, IL 60126.) ■

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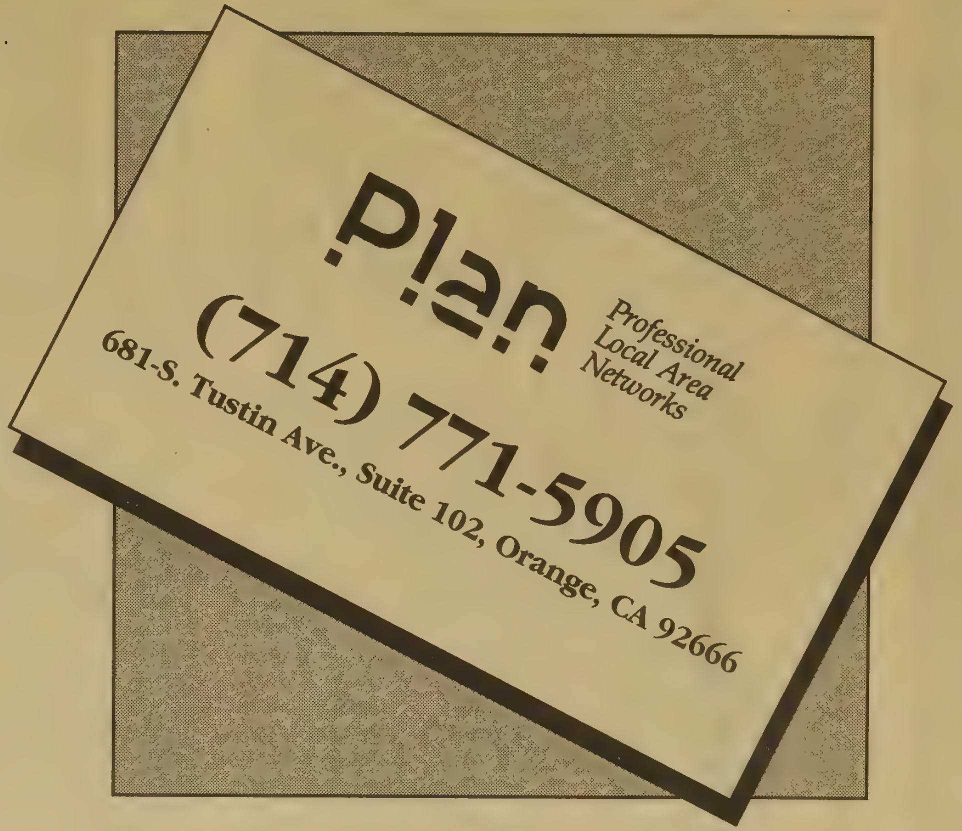
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BUSINESS COMPUTING

BY SUZANNA MUSICK

Do You Need A Multiuser Accounting System?

Remember when you first opened for business? You stocked a variety of good products; you encouraged your customers to pay in cash, and you, in turn, paid your suppliers. Your bank balance grew steadily; you were doing well. Then came more products, charge accounts, terms, a sales staff, support personnel—a real business! Operating out of a checkbook wasn't adequate anymore; you hired a full-time bookkeeper, with ledger books, and journals.

Since then you have probably graduated to a computerized accounting system, a major improvement over the manual process. Now the elusive accounts receivable aging report is printed in time to be meaningful. Financial statements that used to be prepared once a year by your CPA are available at the touch of a button (well, a few buttons). Payroll is accurate and on time, sales analysis reports are useful and inventory is kept current. You're rolling right along.

The business continues to grow, you hire a couple of accounting clerks to help deal with the volume, and now it's time to face the next hurdle. Do you need—and at what point do you need—a multiuser accounting system?

In this column, I'll discuss the major roles of an accounting system, the symptoms of an overburdened single-user system (and how to recognize them), the potential problems such a situation can bring to the business owner, and the benefits of moving to a multiuser system.

The Purpose Of An Accounting System

An accounting system serves two critical functions, of which the more apparent is transaction processing: entering sales, recording purchases, keeping an accurate inventory count, tracking who owes you money (and who you owe), printing invoices, statements, and paychecks—all the activities that go on in the day-to-day operations of a thriving business.

The other critical function is decision support: providing the information needed to make informed business decisions. If you know what products sell best and what products contribute the most to your bottom line, you know what to re-order, and what to stock for the busy season. Cash flow planning is easier if you have reports that show the bills coming due, outstanding accounts receivable, collections, and the cash expected from projected sales. The ability to measure which 20% of your customers provide 80% of your business helps you decide who gets wine during the holidays and who gets a greeting card.

Good accounting software provides extensive amounts of information. From timely reports management can gather enough data to make both day-to-day and strategic planning decisions. As an added benefit, much of that information can often be extracted from the accounting program and imported into other decision support software programs like databases, spreadsheets and financial forecasting, and analysis packages. Management can use this data to perform "what-if" analysis and prepare budgets.

Copyright © 1989 by Suzanna Musick. All rights reserved. Suzanna Musick is a Manager in the Computer Consulting Department of Hemming Morse Inc., CPAs. Her experience encompasses a wide range of industries such as distribution, retail, construction, real estate, financial, and professional services.

The Overburdened System

As your business grows, so do the demands on your accounting system. Once again, the transaction processing requirements are more easily recognized. The accounting department starts putting in overtime, staying late, and coming in on weekends. The operating reports you came to rely on are not so regular any more. The accounting department is spending all their time just getting the transactions entered and the deposits made. Accounting clerks are waiting in line to get on the one computer you have. These are the warning signs of an inefficient accounting department and system, and the possible need to turn that single PC into a multiuser accounting system.

The business that's outgrowing its computer system faces an even greater danger when it comes to the decision support function of the accounting system. As the accounting department gets behind and overloads the single-user system, management reports and strategic planning information are usually the first to go. The accounting clerks monopolize the computer all hours of the day struggling not to fall too far behind. Often it becomes difficult, if not impossible, for the manager or business owner to access the more critical (but seemingly less important as long as everything balances, transactions are more or less up-to-date, and the cash is being deposited) strategic management information.

Management should not lose sight of the value of an accounting system. The accurate tracking of transactions is not an end in itself. Rather, transactions should be processed in order to generate the critical information needed to steer the business in the right direction.

Is Your System Overburdened?

To determine if you are being hampered by a tapped-out system, ask yourself these questions: Is sales order processing becoming a day-long task? Could daily transactions be entered more efficiently by two operators on separate machines? Are there certain accounting tasks that must be done at the same time each day? Do you need a computer at more than one location? Could significant efficiency be gained if certain accounting operations were integrated (data being shared by different functions)?

Management should not lose sight of the value of an accounting system. The accurate tracking of transactions is not an end in itself. Rather, transactions should be processed in order to generate the critical information needed to steer the business in the right direction.

When the flow of decision support information is restricted, it can have a very serious negative, impact on the business. A lack of critical information can inhibit the growth of the business; worse, it can jeopardize the entire operation. Hampered decision-making potentially leads to ineffective cash management, inadequate inventory control, and misassignment of resources. Taken to its next logical step, this information gap can then lead to decreased service to customers, and can result in depressed sales.

Benefits Of The Multiuser System

Upgrading to a multiuser accounting system can often provide substantial relief to the pressures on an overburdened single-user system. The ability to perform many tasks simultaneously, or have multiple people perform the same task, removes the bottleneck of only one person being able to work on the system at any one time. Data entry and data processing can take place while, at the same time, the manager is reviewing transactions or printing a critical report, or as a salesperson checks pricing and inventory availability for a customer.

By upgrading to a multiuser system, a business can increase productivity and open up new growth opportunities. When a multiuser accounting system is properly installed, your business has the capacity to grow, and you have the valuable information to guide that growth in an orderly, well-planned fashion. ■

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AMIGA

BY MATTHEW LEEDS

What Price Protection?

A few months ago I discussed the problem of viruses on the Amiga. Since then Abacus has released a product called the Amiga Virus Protection Toolbox, which contains a disk of programs and a book.

Viruses on the Amiga are, by and large, simple creatures. They mostly inhabit the boot blocks of a disk, and are dangerous only if you do not take simple precautions. The easiest way to deal with them is to assume that every new disk that you are about to insert into your machine is infected, and inspect it prior to giving it a chance to infect other disks in your collection.

Every disk that can be used to start your machine must have a boot block. Virtually all viruses alter the boot block so that they can take over the startup process. By checking the contents of the boot blocks on every disk prior to booting with it, you can protect against viruses.

The Abacus package includes a program to check for abnormal boot blocks in an automatic fashion. If an abnormal boot block is found, the program alerts you and offers to correct it. Some games use altered boot blocks as copy protection or to provide special "speed loading." These boot blocks look like a virus to a virus checking program, but should not be altered.

The Abacus software also allows for the archiving of these altered boot blocks as files. This would allow you to save a special game boot block in case it became defective or was accidently altered. It also lets you create a log of the contents of any disk, and then check to see if any files have been altered or new files added, as an additional protection against other types of viruses.

The book includes a disassembly of a virus, of use to programmers perhaps (but, it seems to me, mostly to those interested in creating viruses), but of little interest to most users who only care about avoiding infection.

There is no mention of the IRQ virus, a non-boot block virus that infects programs, although that virus has been known for at least six months.

Virtually all of the functionality of the Amiga Virus Protection Toolbox is duplicated by freely distributable software, and in many regards those alternatives are easier to use. Abacus's package does offer the security of buying a commercial product instead of trying to find a source for freely distributable products, but at a suggested list of $59.95, the effort would pay off.

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Matthew Leeds has been involved in the high tech field since he blew up his bedroom playing with a children's chemistry kit. He has been using Commodore computers since 1982 and has a strong interest in photography, video, graphics, and related fields.

Good Training Tapes

Far more worthwhile are two training tapes for popular Amiga programs. The *3D Cookbook* from Byte by Byte uses easy-to-follow, step-by-step demonstrations of techniques for creating complex objects and animations using the Sculpt-Animate product line. *Professional Techniques For Deluxe Paint III* from Electronic Arts is a one-hour tutorial on tricks and techniques for getting the best from this best-selling paint package. If you feel like a beginner looking for someone to show you how they do it, these tapes can be a great help.

AmiEXPO Coming To Town

The AmiEXPO train keeps on rolling. The show in Chicago was a tremendous success, with the highest attendance ever at an AmiEXPO, over 10,000 people. Sixty-five companies exhibited, and over 30 seminars and classes on Amiga technology were held. AmiEXPO is coming to the Bay Area, with a three-day show in Santa Clara October 20-22. If you were at the disappointing World of Commodore in Los Angeles earlier this year, I suggest you attend AmiEXPO to see what a real Amiga show looks like.

New Pro Page

Gold Disk has released an upgrade to *Professional Page*, Version 1.3. This new version includes Compugraphic outline font technology, with support for dot-matrix, inkjet, and laserjet compatible printers at their highest resolution. They will also be including direct online support for their word processing program, *Transcript* (used to write this column). They have also released a upgrade to *Transcript* (about time—the original had some annoying bugs; review to follow).

Corporate Games?

A very interesting column by Stewart Alsop appeared in the August issue of *PC World*.

In it, Alsop put forth the proposition that a business environment needs lots of games to succeed. He mentions what he considers the three most successful business environments; Apple II, MS-DOS, and Mac. Game developers need to sell a lot of copies of their product to turn a profit, as opposed to business product developers (due to price differential). Game developers push the state of the art in programming in an environment; this knowledge percolates over to the business developers.

Virtually all viruses alter the boot block so that they can take over the startup process. By checking the contents of the boot blocks on every disk prior to booting with it, you can protect against viruses.

All this tends to argue that the Amiga should make a great computers for the business environment, yet it hasn't succeeded in the general business community. Why? Write me letters with your ideas, I'll pass the best on to Commodore.

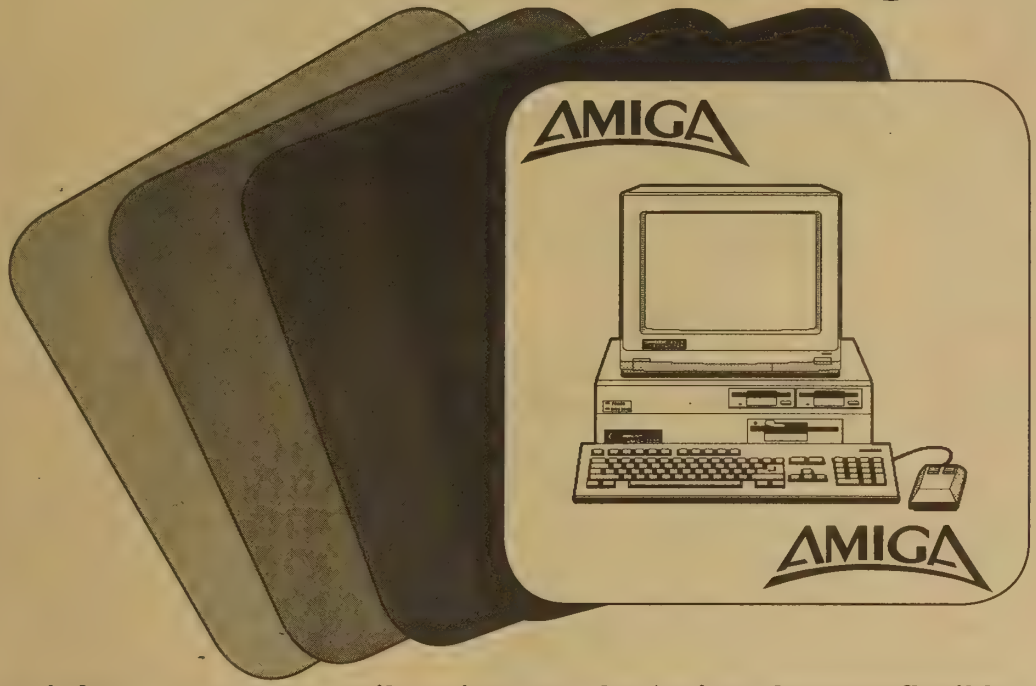
DRAM Futures?

The Pacific Stock Exchange wants to create a futures market for DRAMs. The hope is that a futures market can stabilize DRAM prices and supply. However, so far those companies that distribute and use DRAMs have not shown a strong interest in participating. That may be in part due to the downward trend DRAM prices have shown of late. There may come a time when you will be able to call your broker and take a shot at cornering the market on computer memory.

PD Of The Month

Public domain program of the month is *LS*, version 3 by Justin McCormick. *LS* replaces both *List* and *Dir*; it also provides a remarkable number of additional features. It will format directory listing, provide columnar output, show directories in a different color than files, and sort output. *LS* has a tremendous capability to provide custom output. If you can think of a way you want to see your files listed, it can do it. It intelligently recognizes the size of the CLI window you are using and formats its listing accordingly. Highly recommended. ■

If you haven't been introduced to the Amiga...



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MAC @ WORK

IN THIS ISSUE...

66

War Of The Word Processors MacWrite II Meets MS Word 4

Mary Eisenhart (*MacWrite*) and Tony Rocco (*Word*), both of whom would rather fight than switch, discuss the latest releases of their favorites.

74

BMUG

By David Morgenstern

Tales of miracle hard disk cures, the latest from Guy Kawasaki, and a report on the Boston Macworld Expo.

War Of The Word Processors

Microsoft Word 4.0

Power To Spare

By Tony Rocco

I can't stand using an underpowered, underfeatured word-processing application. Even if it does everything I need, I really want it to do things I never thought I needed, like sort, perform calculations, do word and character counts, create tables, and so forth. Or program in PostScript, even. I may rarely, if ever, use many of those features, but who cares? Porsche owners may never need to go 150 miles per hour either, but they sure appreciate having that capability.

The new version of *Word*, which lists at $395, is anything but underfeatured or underpowered. If you're one of those folks who thought that *Word* 3.0 was pretty nifty, you're going to think 4.0 is really something special. And if you're one of those people who liked all the features but whined about the application not being "Macish" enough, *Word* now allows you to configure its menu commands any way you find "Macish." You can take a command under, say, the Format menu and place it under the Document menu and give it a completely new key-command set. You can also save different menu configurations as separate files for users with different preferences. Of course, there's only so much you can do with moving menu commands around. If you object to dialog boxes within dialog boxes, you may actually

> If you're one of those folks who thought that *Word* 3.0 was pretty nifty, you're going to think 4.0 is really something special.

continued on page 68

MacWrite II

Claris Gets It Right

By Mary Eisenhart

When Apple's *MacWrite* came out in its 5.0 version under the new Claris label, the future of the product, which had once been bundled with every Mac, looked pretty unpromising. The 5.0 version suffered from a bad case of too little, too late: while it introduced a few improvements over the venerable 4.5, it continued to lack features every other Mac word processor had had for some time, from niceties like showing invisible characters to out-and-out necessities like having multiple documents open on the screen at the same time.

Many loyal *MacWrite* users gave up and switched to *WriteNow*. Or, if they had enough memory, *FullWrite Professional*, which compensated for its insatiable lust for RAM with unique and delightful features like embedded notes and wrapping text around irregularly-shaped graphics. And some went for *Word* or *WordPerfect*, which offered power and a fair amount of connectivity at a hefty price, both in dollars and in dealing with interfaces that were neolithic by Mac standards.

> *MacWrite II* is no longer simply a default, it's a product you've almost got to have compelling reasons *not* to buy before you rule it out.

MacWrite II was long awaited as the product that would either re-establish *MacWrite* as a standard or sink the name into eternal oblivion. And, speaking as a diehard *MacWrite* user who's been using the new version for several months now, I'd say that Claris has come up with a real

continued on page 68

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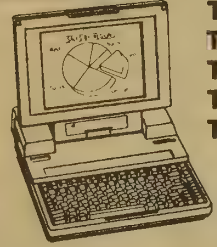

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Microsoft Word 4.0

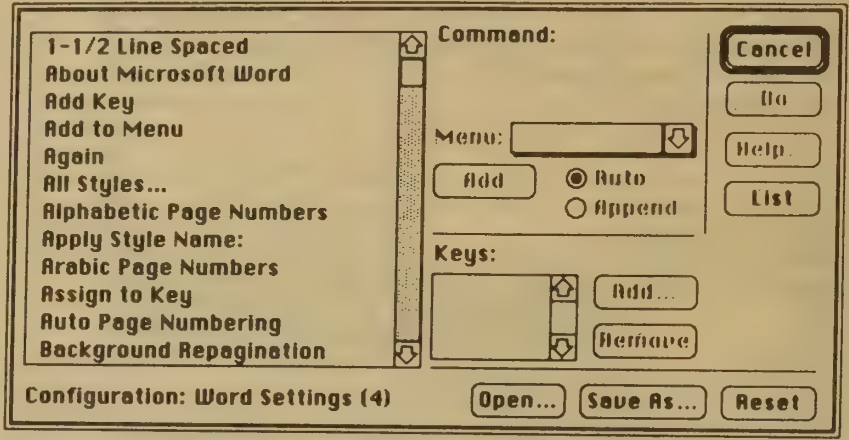
have more trouble with 4.0 than the earlier version despite customizing the menus.

New Features: Style Sheet Improvements

As far as the interface is concerned, Microsoft did two things I wanted them to do: give Print Preview a keyboard command and make Style Sheets more accessible. You can now double click on the status bar at the bottom of the screen indicating the current style and get the "Define Styles..." box. Styles also reside on a pop-down menu on the left side of the ruler. If you keep your ruler down at all times, you can easily select styles from there. The most efficient thing to do, however, is create your own Work menu and list each style under there. That way each style can be easily selected whether or not the ruler is visible.

Table Generation

Aside from customizable menus, the most impressive new thing about *Word* is its table generation capability. Business users who need to present information in tabular form will find this feature a delight. You can create tables in two ways: by converting text into tabular form or by creating an empty table into which to manually enter text. Both involve giving the Insert Table command from under the Document menu. By highlighting the desired text first, you can convert into table form text delimited with tabs or commas, or text that's in paragraphs or side-by-side paragraphs. (Each paragraph would occupy a cell.) Or you create an empty table to fill in with text and numbers. In the latter case, you also determine the number of columns and rows and column widths. You can format the text in any row, column, or cell independently for alignment, leading, indents, and character attributes. And you can easily convert a table back into tab or comma delimited text, or into paragraphs, by selecting the desired rows or columns and giving the Table to Text command.



Configuration: Word Settings (4)

The Commands dialog box allows you to easily configure Word's menus and key commands any way you like.

Document Preview

The ability to preview a document is one feature I really liked when *Word* 3.0 was introduced many moons ago. While Microsoft has enhanced this capability by putting a print icon in the Print Preview window, it has also reduced its usefulness by eliminating the magnifying glass that enabled you to enlarge selected parts of text and graphics for close examination.

A new option, Page View, gives you a *WriteNow*-like page with margins indicated by dotted lines and actual page boundaries shown on screen. This mode is necessary to view multiple column text and footnotes in true WYSIWYG, and is a great improvement over having to switch between galley mode and Page Preview in the earlier version. Page Preview in 3.0 and its equivalent in 4.0, Print Preview, show pages as they are going to print, but do not allow editing. To view text the way it's going to look as printed and have the ability to edit it, you now use the new Page View mode. *Word*'s default galley mode, which works much faster, is adequate when formatting is of secondary importance.

continued on page 70

MacWrite II

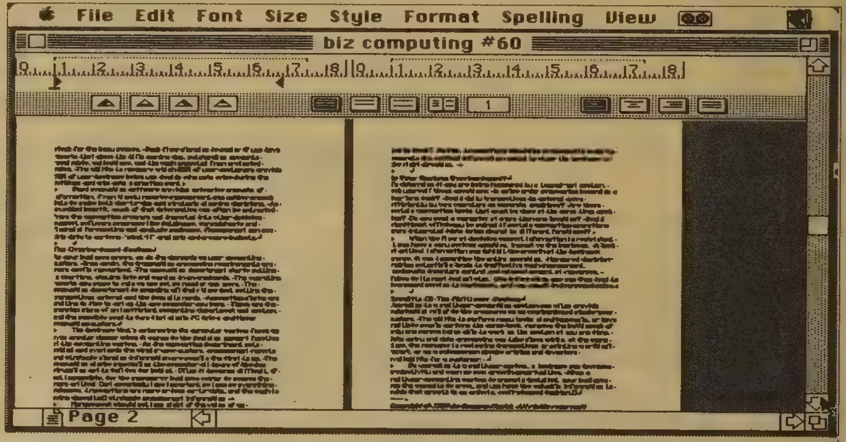
winner. *MacWrite II* is no longer simply a default, it's a product you've almost got to have compelling reasons *not* to buy before you rule it out. Competitively priced at $249 list, it includes the features most people are ever likely to need, and makes it easy for those people to use them.

What's New

MacWrite II includes many new features and enhancements, many of which it shares with other word processors: multiple column capability, color text support, mailmerge (about which more later), footnotes, the long-awaited ability to have more than one document open at a time, and control of formatting characters. The miserable spellchecker in *MacWrite* 5.0, which was so slow as to be useless, has been replaced by the speedy and intelligent *SpellFinder* from Microlytics. There's still no outliner, but considering the sheer clunky counterintuitiveness of the existing outliners included with Mac word processors (as contrasted to the perfectly wonderful one included with Aldus *Persuasion*), you're probably better off buying *Acta* if you need an outliner anyway.

One of my personal favorites among the new features is that you're now able to save a selected piece of text as a separate file, rather than going through tortuous sequences of cutting, closing, opening, pasting, etc.

Search-and-replace functions have been enhanced; you can now search only for 10-point italic Palatino occurrences of a particular word and have them all changed to 14-point underlined Symbol, if you're so inclined.



MacWrite II lets you view pages side-by-side and reduced; unlike some other word processors, it lets you make changes to the document in this mode.

The *MacWrite II* window is something of a departure from the familiar *MacWrite* look: unless you tell it not to, your document will open up in Helvetica and with a right margin extending off the right edge of the screen. There's a horizontal scrollbar at the bottom of the screen, and the page number in the vertical slider bar has been replaced by the more *Word*-like page number in the bottom left corner. However, with minor exceptions using the new *MacWrite* feels much like using the old *MacWrite*; Claris has managed to add and enhance a myriad of features without sacrificing the marvelous ease of use that's becoming something of a company hallmark.

Mailmerge

While Claris trails the pack in having brought mailmerge to its eager users, it has its competitors beaten hands-down with the actual implementation of this function.

For a description of how other word processors (*Word*, *FullWrite*, *WriteNow*, etc.) handle mailmerge, see the accompanying *Word* review. It's a cumbersome process of hand-keying chevrons and codes into your text, and nobody likes it.

On the other hand, never having done a mailmerge in my life, I managed to put together a form letter complete with IF/ELSE statements in ten minutes, just glancing occasionally at the manual for syntax. Now THAT's ease of use.

I used a database in *FileMaker* (but any tab-delimited ASCII will do), exported the records I wanted as a merge file, then opened the merge file from the File menu in *MacWrite II*. From that point it was simply a

continued on page 70

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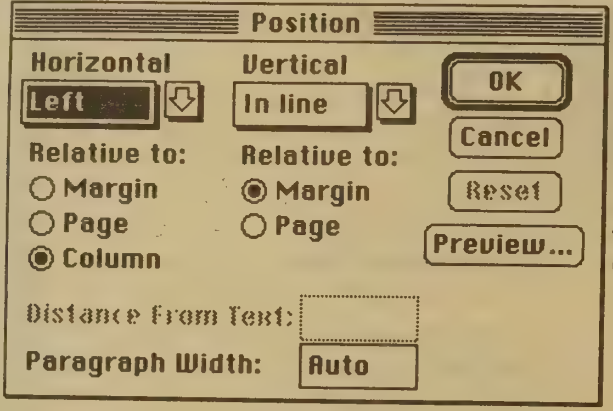
Microsoft Word 4.0

Miscellaneous Improvements

Word 4.0 has several other completely new features such as smart quotes, background repagination, picture placeholders for faster scrolling, color text, an italicizable cursor, support for Microsoft Mail, and a Format Again command (for repeating a formatting command). In addition to these new features, *Word* has had some of its old ones enhanced and streamlined. Index and table of contents generation is easier now that *Word* automatically enters the proper invisible text to mark entries rather than require you to type it in manually. An Insert Page Break command substitutes for having to press the Command and Enter keys simultaneously. Positioning side by side paragraphs, awkward and tedious in *Word* 3.0, is much easier with the Position command in 4.0. You also gain the ability to absolutely position paragraphs or graphics (which are treated as characters in *Word*) and put as much space between them and surrounding text as desired.



Horizontal: Left
Relative to: ○ Margin ○ Page ● Column
Vertical: In line
Relative to: ● Margin ○ Page
Distance From Text:
Paragraph Width: Auto

Positioning paragraphs side-by-side or anywhere on a page is done with the Position dialog box.

> Aside from customizable menus, the most impressive new thing about Word is its table generation capability. Business users who need to present information in tabular form will find this feature a delight.

A few enhancements also have been made to the outlining capability in *Word*, but they are minor. While fairly easy to use, the outliner is still not the full-featured thing the outline power-user would ideally prefer. Fortunately I don't put outliners to much use, so it doesn't bother me. But if you're serious about outlining, you may have to look into a desk accessory like *Acta* from Symmetry Corporation. Maybe they should even bundle it with *Word*.

Mail Merge: Still Not Where It Should Be

One thing I wish they could also streamline is mail merge. It works the way it always has, by the user marking fields on the main document with chevrons and delimiting those in the DATA document with tabs or commas. I read somewhere that this technique is actually some remnant of a primitive PC programming language, at least as far as the chevrons go. This way of doing things has no place in a Macintosh application. Maybe Microsoft can take a lesson from the way it has enhanced the implementation of index and table of contents generation to make mail merge easier as well.

You can enter IF, SKIP, SET, ASK, INCLUDE, and NEXT commands when performing a mail merge. What does that mean? It means that you can enter or not enter text in a merged document depending on whether it meets some defined criterion. Skipping a record entirely, depending on whether a certain criterion is met, is possible as well. You can also have *Word* prompt you to enter a value for each merged piece or for the entire batch. And if you have text in a third document, you can include it in your merged text with the NEXT command.

Graphically Speaking

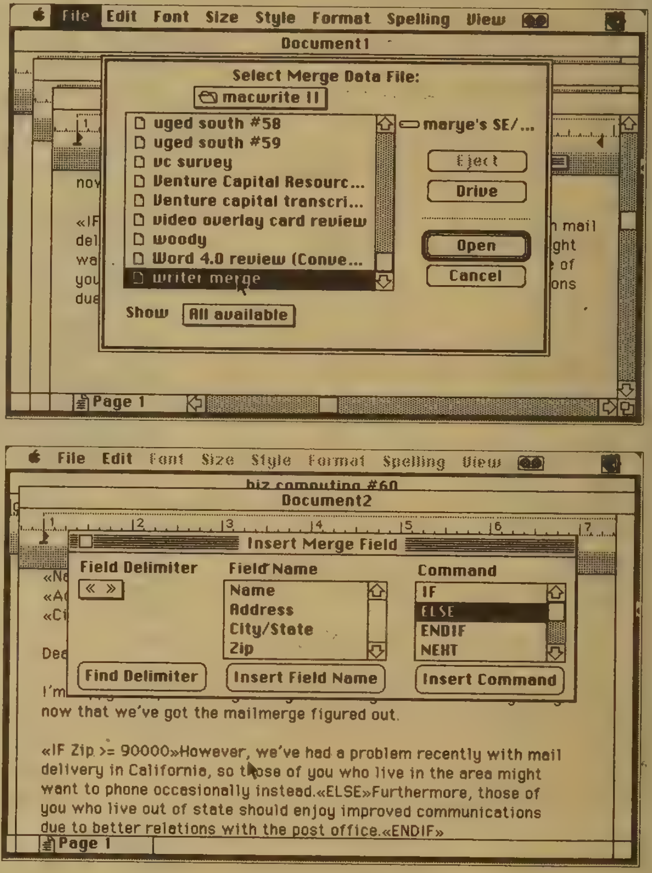
As far as graphics handling goes,

continued on page 72

MacWrite II

matter of positioning the cursor where I wanted each merged field to go and selecting the appropriate criteria from a dialog box.

If your office frequently has to send out form letters, especially form letters with content that varies according to certain criteria (e.g. California residence, unpaid balances over $100, school-age children, etc.), I can't recommend this package strongly enough. It makes mailmerge a breeze instead of an ordeal.



now that we've got the mailmerge figured out.

«IF Zip >= 90000»However, we've had a problem recently with mail delivery in California, so those of you who live in the area might want to phone occasionally instead.«ELSE»Furthermore, those of you who live out of state should enjoy improved communications due to better relations with the post office.«ENDIF»

Unlike what's standard in other applications, MacWrite II makes mailmerge a simple matter of selecting and clicking. This paragraph results in one message going to California-based recipients, another to those out of state.

Style Sheets: Half A Loaf

Having always been fairly content with the *MacWrite* default settings through 5.0, I never much saw the need for style sheets. Hey, if it opened on the screen in 12-point Geneva I was happy. However, when *MacWrite II* came along and insisted on opening 12-point Helvetica documents with margins going off the screen, I found this sufficiently disorienting to try to figure out how to fix it.

You fix it with style sheets, or, in Claris parlance, MacWrite Stationery. Style sheets determine the default settings for documents you work with frequently, and while *MacWrite* lacks the sophistication of *Word* in this regard, it allows you to save as many types of stationery (say, one for reports, one for correspondence, etc.) as you like. You can also set up a document with the font and dimensions you like, save it as stationery, and install it in your System folder, and then all your new *MacWrite* documents will open up looking the way you like them.

In real life, this doesn't work as well as I'd like. True, new blank documents now open with narrower margins and the Geneva font I know and love. However, other documents, whether *MacWrite* or converted from elsewhere, cling persistently to their original formats when you open them in *MacWrite II* no matter what you've got installed in your System folder. I think Style Sheets would be a lot more useful if everything opened up looking the way you wanted it to, or if you could make it that way with a click or two. As it is, I still spend too much time reformatting received text.

Format Conversion

A big improvement over earlier *MacWrites* is that *MacWrite II* now seamlessly imports and exports many other standard word-processor formats, including *Word* 3 and *WriteNow* 1, as well as plain ASCII. Version 1.0 has the seriously distressing flaw of not saving in ASCII-with-linefeeds format, a major draw-

continued on page 72

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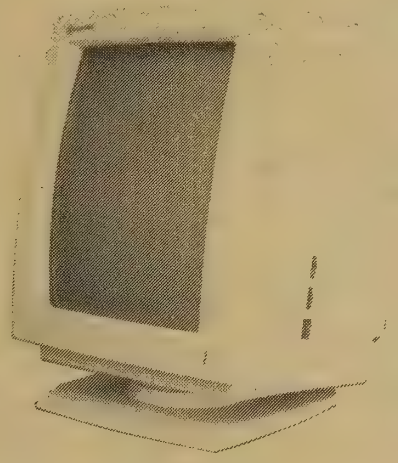

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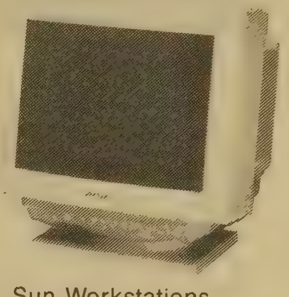

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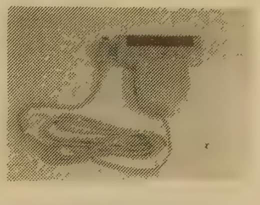

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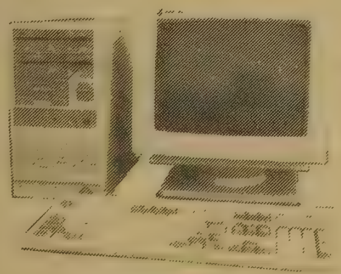

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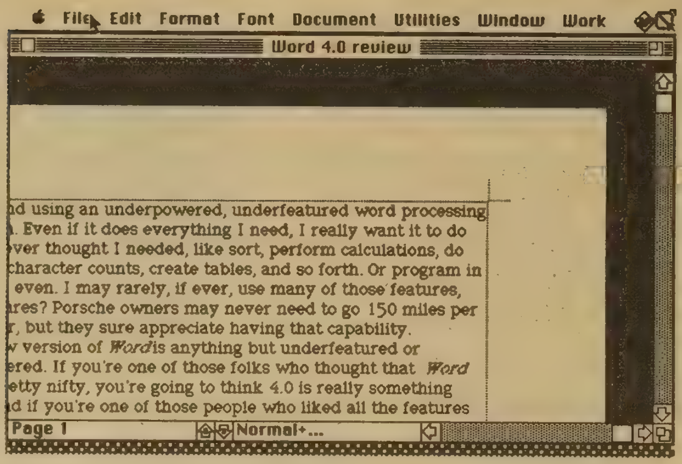
Microsoft Word 4.0



ıd using an underpowered, underfeatured word processing
ı. Even if it does everything I need, I really want it to do
ver thought I needed, like sort, perform calculations, do
character counts, create tables, and so forth. Or program in
even. I may rarely, if ever, use many of those features,
ıres? Porsche owners may never need to go 150 miles per
r, but they sure appreciate having that capability.
v version of *Word* is anything but underfeatured or
ered. If you're one of those folks who thought that *Word*
etty nifty, you're going to think 4.0 is really something
d if you're one of those people who liked all the features

The new PageView mode give you editable WYSIWYG for the first time in Word.

you still can't wrap text around a graphic *a la FullWrite*. Nor can you create graphics from within the application, also possible in *FullWrite*. All right, you *FullWrite* fans can gloat over these "deficiencies" as long as we *Word* aficionados can take pride in the fact that our application of choice doesn't take four megabytes of RAM and 32-bit CPU to run efficiently. If you really want to make heavy use of graphics in your word-processing documents, Microsoft has bundled *SuperPaint* 1.1MS (for Microsoft) with *Word* 4.0. That way you can have paint and object-oriented graphics capabilities without having to invest your life savings in new SIMMs. On the topic of graphics, I should also mention that *Word* does not yet support color graphics.

Extras

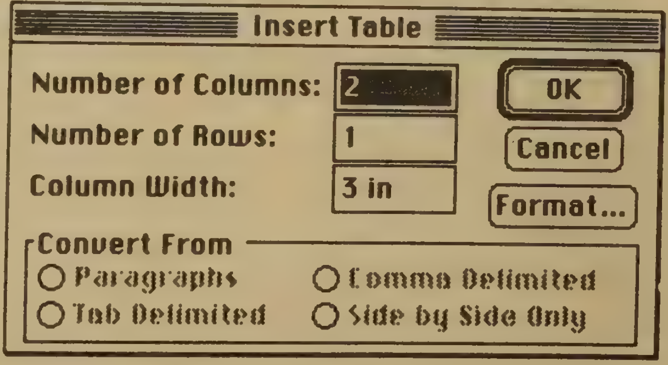
Other things bundled with the new *Word* include a version of Microlytics' *WordFinder* that works only with *Word*. This DA is an on-line thesaurus that I have found easy to use and fairly valuable. *AutoMac* is an INIT also included with the application. This software makes it possible to create macros, sequences of commands the user programs and can later execute with a single keystroke.

Purchasers of *Word* 4.0 can also buy a software utility called *DocuComp* from Advanced Software at a fraction of the price it normally sells for. This unique software allows you to do a comparison of two versions of a document to show what changes have been made from one to the other. The two documents don't even have to be created in the same application.

Conclusions

The confirmed *Word* user will find much to be happy with in the new version. Customizable menus, table generation, an editable page view mode, easier index and table of contents generation, automatic pagination, smart quotes... the list goes on and on. The uninitiated in search of a true power word processor will definitely find *Word* 4.0 worth serious consideration. Unless your requirements include creating graphics within the application, the new *Word* can hold its own against any other word processor.

And of course you can always challenge your friends to do PostScript programming on their word processors. I'll bet they don't have a car that will go 150 miles per hour either. ■



Number of Columns: 2
Number of Rows: 1
Column Width: 3 in

Convert From
○ Paragraphs ○ Comma Delimited
○ Tab Delimited ○ Side by Side Only

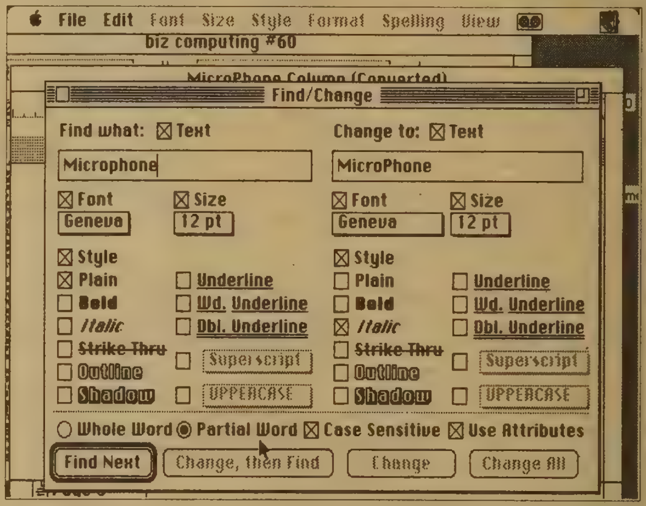
With Insert Table, the presentation of data in tabular form is mad much easier.

MacWrite II

back if you're moving text back and forth with non-Mac systems and an actual step backwards from old *MacWrite*, which supported text-with-linefeeds in a none-too-elegant form. However, version 1.1, due about the time you read this and free to registered users of 1.0, remedies this boneheaded omission and provides even more conversion utilities, including *WordPerfect* and a number of PC formats. Still no *FullWrite* converters, though, a decision which apparently has more to do with Ashton-Tate's reluctance to share its code than with Claris's (or Microsoft's, or T/Maker's) unwillingness to provide file exchange capabilities.

Graphics And Color

MacWrite II lets you choose a color for your text. Unlike most word processors, it will also let you import color graphics into your document.



Find what: ☒ Text
Microphone
☒ Font Geneva ☒ Size 12 pt
☒ Style
☒ Plain ☐ Underline
☐ Bold ☐ Wd. Underline
☐ Italic ☐ Dbl. Underline
☐ Strike Thru ☐ Superscript
☐ Outline ☐ UPPERCASE
☐ Shadow

Change to: ☒ Text
MicroPhone
☒ Font Geneva ☒ Size 12 pt
☒ Style
☐ Plain ☐ Underline
☐ Bold ☐ Wd. Underline
☒ Italic ☐ Dbl. Underline
☐ Strike Thru ☐ Superscript
☐ Outline ☐ UPPERCASE
☐ Shadow

○ Whole Word ● Partial Word ☒ Case Sensitive ☒ Use Attributes

Search-and-replace functions have become much more sophisticated.

Given the current state of output devices, however, it's questionable how useful this is right now. Even a color-ribboned ImageWriter ignores colored text and graphics magnificently, and word-processing documents aren't great candidates for film recorders and service bureaus. *MacWrite* also won't generate color separations.

Another reason you probably shouldn't throw out your desktop publishing package just yet is that while *MacWrite* will let you import graphics into your text, and has made it a whole lot easier to size and crop them using standard Mac handle-grabbing techniques, it still won't wrap text around regularly-shaped graphics, let alone irregular ones. If this is something you really need from a word processor, buy *FullWrite*, which does it beautifully.

Who Needs This Package?

Overall, there are quite a few good word processors out there for the Mac at this point, and your choice should be governed chiefly by which package offers the features you need at the best price. Claris generally positions its products as midrange, offering the capabilities most people are likely to need, and about the only people who shouldn't be seriously considering *MacWrite* are those with a particular requirement (e.g., wrapping text around graphics, detailed session records, sophisticated table handling such as that offered by *Word* 4) it doesn't satisfy.

A big improvement over earlier MacWrites is that MacWrite II now seamlessly imports and exports many other standard word-processor formats.

If your office does a lot of mail-merged correspondence, *MacWrite*'s supremely accessible approach to this function probably makes it your best choice. If your business is starting to outgrow its all-in-one package like Microsoft *Works* but still needs to do a fair amount of database/word processing file sharing, the *MacWrite II/FileMaker II* combination is affordable and hard to beat for ease of use. And if your word processing needs run to letters, reports, term papers, theses, and the like, *MacWrite II* will do all you need. ■

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MAC @ WORK

BMUG

BY DAVID MORGENSTERN

Kozmic Karma, Kawasaki, And The Boston Macworld Expo

Fall is in the air—the smell of burning leaves and power supplies floats in the breeze. Tackle football and frisbee tournaments have been banned in the BMUG office after several near head crashes. Here's this month's half-time report that's full of hot potatoes, news, and tips!

Ethereal Talk Network

Sometimes the cosmic handshake seems more present than usual at BMUG. It certainly must have appeared so to a member who brought a dead hard disk into the office recently. The drive wouldn't mount, even with the prayers and tears of its owner.

Steve Costa, BMUG's Technical Director, laid hands on the drive and it promptly spun, singing its squeaky SCSI song. Steve thinks it may have locked up from tiny droplets of sticky oil leaking from the drive spindle, and the ride to the office jarred the mechanism loose. I prefer to believe that it was the righteous energy of BMUG members flowing though Steve's fingers that did the trick!

Harvey, a BMUG member of long standing, is a different case of disk figmentation. His hacking is almost compulsive. If a bug exists in a program, Harvey will find it. He is the premier example of low-level bio-machine coding—his genetic structure contains computer viruses!

A company was demonstrating a 600 Mb read/write optical disk at a recent meeting. Their Mac representative had quit (or got the axe) the day before the demo, but the bosses were game to show the drive. The two optical jockeys did pretty well for people who obviously didn't know one end of the Finder from the other. Suddenly they said, "Perhaps one of you Macintosh experts would like to give us a hand?"

In an almost Pavlovian response, Harvey shot out of his seat and raced down the steps on the sides of the lecture hall. A ninja could not have handled that dark walkway any faster. The BMUG crowd looked on in horror, knowing that the "innocent" marketing boys were going to experience 100 hours of beta testing in an instant. Harvey took the mouse in his hand and pulled down the DA menu — Crash.

Some doubting rationalists claim the crash was from memory mismanagement, or an INIT conflict. However, Harvey is led to bugs like a bloodhound following a scent.

What followed was icing on the virtual cake. As the Mac rebooted, the **This is not a Mac disk** dialog turned up for the optical disk and Harvey's finger (still on the mouse button) couldn't resist the impulse to initialize (he protests his innocence). How long does it take to reinitialize a really big mag-optical drive? An eternity in the BMUG Zone.

Harvey also won a copy of the *Cosmic Ozmo* game at the night's raffle. Mac Spooky!

Boss Town Expo

The Boston Macworld Exposition was not the Mac summer box office blockbuster this year. The BMUG attendees (about 20 strong) thought there were few earth-shaking products or announcements. Claris typified the log-cutting action with fascinating press releases offering hands-on demos of *MacWrite II* at their Expo booth—hold me back!

The number of *idiot demos* was down at the Expo. Idiot demos are characterized by a constant stream of "I dunno, I'll have to ask someone back at the office," responses to questions. Marketing representatives seemed to know what they were talking about for a change. The T-shirt Index was up, showing that shirt budgets of Mac software companies seemed to be reflecting the increase in corporate sales.

The best show parties are usually held in Boston. Bonsu, a software distributor, held a gambling casino theme party and gave away little plastic roulette wheels. The invitation-only Hewlett-Packard DeskWriter party had a classy string trio and the best food—cooked-to-order chicken and pasta, rare roast beef, a boat full of local seafood, and tomatoes with fresh mozzarella. Why was anyone surprised that H-P stock took a dip a week after the show? The Boston catering check cleared the bank.

The Apple MultiMedia Party was expected to be the hot ticket at the Expo. This "massive multimedia bash" was as flat as a day-old diet cola. The party featured a singer, described as a cross between Julie Andrews and Barbra Streisand, accompanying herself with a MIDI controller. Bud Light and Rolling Rock beer were the only free drinks. The CITI Club employees handed out free passes to the crowd, hoping they'd come back when the action was for real.

The BMUG booth went against the suit-and-tie tide. We featured a painted backdrop of a brick wall with yellow spray-painted BMUG graffiti. This 20-

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BackWords

The BMUG HelpLine has had a long experience with the **Fast Save** feature of *Microsoft Word.* A **Save** is not a save in *Word*—it is a **Fast Save**. The faster save allows the program to store changes to the document in a discrete place, rather than rewriting the whole changed file to disk. This can save time, especially with large documents. Unfortunately, lots of little changes can add up to lots of disk space used to store changes, instead of just the text.

The solution was to **Save As** a different (or replace with the same) file. Many stand-alone spelling checkers, such as the popular *Spellswell* 2.1, have trouble with Fast Saved documents. They can't keep track of all the changes—let's face it, sometimes *Word* has trouble keeping up with all the changes. The new 4.0 version of *Word* gives not-so-speedy-minded users a way to turn off this "feature."

Open *Word* and select **Commands** from the **Edit** menu (if you don't see **Commands**, select **Full Menus**, then...). A dialog box will come up with a scrolling field of commands on the left. **Select** the *Fast Saved Enabled* from the list. To the right of the scrolling list is a shadowed pop-up box called **Menu**. Click on it and make sure the **Edit** menu is selected (it's checked). Click the **Add** button and then the **Do** button.

With the addition of this item, *Word* will perform a regular **Save** from the **File** menu. The **Edit** menu contains the **Fast Save Enabled** command if you ever want to invoke it. Thanks to the San Diego MUG Newsletter, 8/1/89, for this tip.

- For more *Word* 4.0 fun, check out the word *childcare* in the spelling checker. It's not in there, so now have the program suggest a spelling. Would you have thought of *kidnapper?* MacBizarre.

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foot masterpiece (our last booth was accused of being designed by refugees from the Pee Wee Herman show) was executed by Jim O'Connor. The booth was featured (okay—two seconds' worth) on the CNN Expo report.

Here are some of the other products and trends noted by the BMUG contingent:

- *MicroTV* by Aapps Corporation of Mountain View is a $400 board that allows users to watch TV while working on their Macs. The board puts a small monochrome window on a Mac II. The company says that upgrades will include gray shades and color. If you thought you had productivity problems, you ain't seen nothing yet.
- Olduvai Corporation ran a little "technology demonstration" with their product, *Plus.* It's the latest entry in the *HyperCard* clone/superset race (like *SuperCard)*. The demo included the program running under Presentation Manager software on a OS/2 PC. Olduvai's President, Juan Chotsourian, tried to put the humanitarian stamp on *Plus,* saying, "We're not trying to copy anything, just trying to improve the *HyperCard* world for everyone." Apple Legal could only hold back the Big Blue sea for so long.
- SIMM prices started the show at $140 and fell quickly. Gold Chips, a vendor in the Bayside Expo Center, was selling an unadvertised special of $79 per one-megabyte SIMM. SIMMply marvelous.
- Everyone was surprised at Silicon Beach (the makers of *SuperCard* and other Super-named products) missing the show. The line given was that they're putting their money into non-Mac-specific shows, like the SIGGRAPH and HyperMedia shows. BMUGers heard it different—the Beach crowd didn't think their booth location was Super enough, so they took their marbles and went home. *SuperCard* was featured in six booths anyway.
- Mitch Hall, the promoter of the Macworld Expo shows, was happy. The weather was cooler than the last couple of years, and the number of Macs suffering heat-stroke was down. Many exhibitors gave away promotional fans, including a battery-powered model in the Farallon booth.
- The first 15 rows of the audience at Jean-Louis Gassée's keynote address got an extra treat. A stagehand was talking to a friend on the phone—the phone line that Jean-Louis needed to use for part of his demo of remote Mac-ing. The hand was not in the least bit impressed with the Apple President's credentials and cussed a big blue streak. The first dozen rows got a free language lesson from a pro.

Gassée's patience and nerve were tested when the stagehand's buddy called back three times. The first call Gassée pretended to be a pizza deliveryman, the second his modem answered, and the third time Jean-Louis yelled a bit himself. Is this how you'll handle labor/management disputes at Apple, Jean-Louis?

- The Wallaby Laptop System by Wallaby Systems, Inc. won the Expo pantomime laptop award. The Wallaby is a $3000+ "add-on product" for your Mac Plus or SE. It steals the ROM chips from your Mac and puts them in a small, fast laptop computer. You can buy a PC style mouse, or use the built-in ISOPOINT device—something like a rolling space-bar. When you get home you can hook up your Mac, use both monitors, and your Apple keyboard and mouse. This is an easy way to keep the kids from fooling around with the Mac when you're at the office.

The BMUG crowd looked on in horror, knowing that the "innocent" marketing boys were going to experience 100 hours of beta testing in an instant. Harvey took the mouse in his hand and pulled down the DA menu—Crash.

- A boatload of disk security programs were announced and shown at the show, including Fifth Generation Systems' *DiskLock,* Casady & Greene's *A.M.E.,* Highware's *FileGuard II,* Magna's *Empower,* and Symantec *SUM II* module, *SUM Encrypt. DiskLock* was written by an Apple SCSI maven, while *A.M.E.* patches 89 system traps, SCSI driver, serial driver, and every possible protection option.

These are all scary programs to BMUG technical staff. They may render a disk drive unreadable after a crash. If the data is encrypted, file recovery is impossible. Sometimes the disk is so protected it can't remember its own passwords during normal use. Yikes!

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- 200 Watt Power Supply & Deluxe Case
- 12 MB Floppy Drive
- 16 Bit Floppy & HDD Controller
- 20 MB Hard Disk
- 2 Serials/1 Parallel/Game Port
- VGA Card
- VGA Color Monitor
- 101 Enhanced Keyboard
- 1 Year Warranty

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AT 286 6/12 MHz
VGA w/40 MB Hard Disk

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- 20 MB Hard Disk
- 2 Serials/1 Parallel/Game Port
- VGA Card
- VGA Color Monitor
- 101 Enhanced Keyboard
- 1 Year Warranty

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Laser Printer (Fujitsu)	$1495
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Epson	CALL
Star	CALL
20 MB Seagate	$205
40 MB Miniscribe	$285
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(Monitor Optional)
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- Controller for floppy & hard disks
- 1.2-MB floppy drive
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- 8 expansion slots
- Clock/calendar with battery
- Full 1-year warranty

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- Serial port included
- Game port included
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- parallel & serial ports included

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386's also available

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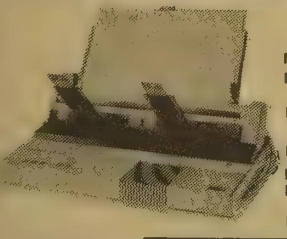

brother

New! M1809 – 360cps, 80 col.	.$Call
New! M1824L – 24-pin, 270cps	Call
M1709 – 240/50cps, 136 col., 24K buffer.	.Sale 379
M1109 – 100cps, 80 col	.$169
HR-20 – 22cps daisy printer, .	$345
HR-40 – 40cps daisywheel printer w/ built-in sheet feeder.	$595
M1724 – 24-pin head, 216cps.	$549

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FX-1050 – 164cps, 132 col.. .	$535
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LQ-1050 – 24-pin, 132 col . .	$769

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H-P LaserJet Ver.II	.$1625
H-P LaserJet 2D.	.$2660
H-P DeskJet Classic, 2ppm. . .	.$549
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Fujitsu 3400, 24-pin 132 column, 800 Hrs. life, color option .	.$525

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Fortis DX-21 – 22cps Daisywheel printer, 1 year warranty . .	.$349
Fortis DX-41 – 40cps Daisywheel printer, 1 year warranty . .	.$589
Fortis DM-1310 Printer, 130cps, 80 column.	.$225
Fortis DM-2010T Printer, 200cps, 80 column.	.$325

NEC

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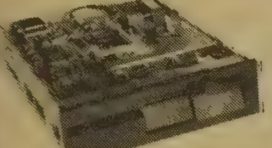
Toshiba P341-SL – 24-pin. . .	$585
Toshiba P351SX – 360cps. . .	$965

DRIVES



5.25" DRIVES

Teac, Fujitsu, Toshiba

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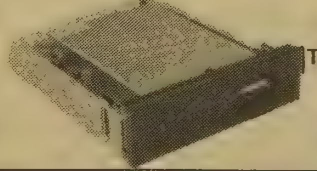
$69	$89



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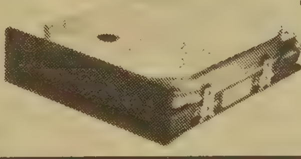
Teac, Sony, Fujitsu, Toshiba

720K	1.44MB
$75	$89



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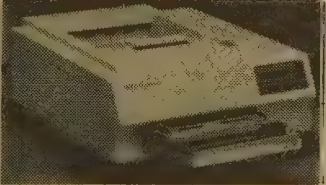

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H-P Laserjet Ver. II . . .	$1,625
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Brother HL-8e.	$1,725
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Fortis Laser 2MB, ...	$1,495
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Hayes 1200B internal w/Scom	$275
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Digitan Hi-IQ 2400B Internal	. $99
Smart One 1200B Internal. .	. $69
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Smart One 2400 External . .	.$149
2400B int for Toshiba laptop	.$369

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These are also good programs to play around with during the office party, after the punchbowl is drained. Wouldn't it be funny if...?

- *After Dark* by Berkeley Systems is the "last screen saver you'll ever buy, or copy from a friend." The program is a Control Panel Device (CDEV) that has everything from lightning bolts to worms and line art. You can have your own drawings bouncing around the screen, or type a quick message into the CDEV and have it displayed. They are also including the instructions on how you can program your own screen saver modules. The $40 product allows background tasks, unlike some other fancy commercial screen savers.

If you've been overdoing the Expos this year, get ready to go cold turkey. The San Francisco Macworld Expo won't be held in January this year. Exhibitors will be able to watch the Super Bowl in peace. Unfortunately, the show was moved to April, where it conflicts with Passover and Easter. St. Silicon will be working overtime.

Just An Ordinary Guy?

It was a BMUG lovefest night in August, when golden boy Guy Kawasaki came to a meeting. He was hawking his new book, *The Macintosh Way*, and the new version 2.0 of *4th Dimension* by his company, ACIUS. As the old adage goes, he was also selling himself—an easy task in the BMUG-Kawasaki mutual admiration society.

How do you get BMUG to love you? Having a decent product helps. Giving great demo helps too, especially when the dish is reheated leftovers, like the long-hyped release of the newer *4D*. But write a book about guerrilla management and computer marketing sprinkled with BMUGisms! Guy, who loves ya?

"BMUG is the quintessential example of the Macintosh user group phenomenon... BMUG's mission statement is '...to give away information.' It's so on top of things that it quoted from this book six months before it was printed." Guy then quotes himself being quoted in the BMUG *Memo*, without permission. When we see a good quote we go for it—even if the book is still in beta testing.

The book is a lot of fun. Guy claims he was tired of the revisionist backward-looking books being written about Apple and the development of the Mac. "You have to be inside the reality distortion field [at Apple] to really understand what's going on."

On the big telecommunication services you can find lists of bugs found in popular programs. Here is the *Macintosh Way* bug list:

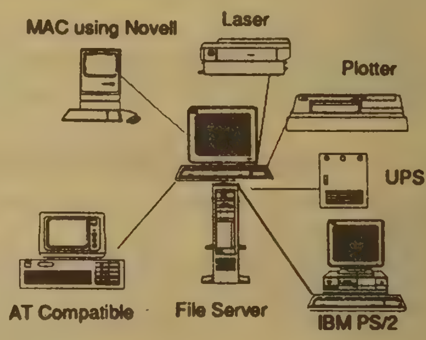
- Guy misquoted the BMUG motto. It's supposed to be *We're in the business of giving away information.*
- He said the publisher of *Wingz* is "Informative Software"—it's Informix. I like Guy's version better though.
- In the colophon the program *QuickeKeys* is spelled with two "k"s.
- When writing of the World Trade Center (Boston Expo), Guy says, "The only thing worse than its location is its air conditioning." The Trade Center is almost cool compared to the Bayside Center. In 1988, the air conditioning system in Bayside didn't work! That pile of junk is off the bad-worse scale—it's closer to malignant.

Guy Kawasaki brought the world up to date when he said that everyone at BMUG should buy a copy of his book. Harry, our business manager, reminded everyone we have a lending library at the office. Kawasaki said, "It's copy protected."

Guy brought the world up to date when he said that everyone at BMUG should buy a copy of his book. Harry, our business manager, reminded everyone we have a lending library at the office. Kawasaki said, "It's copy protected."

Copy protection is on the lips of *4th Dimension* developers these days. The product checks for *4D* serial numbers on a network and won't allow multiple copies of a particular number. If developers want to test a database in a network trial, they have to buy an additional copy. Apple pie and copy, please.

SFT NetWare



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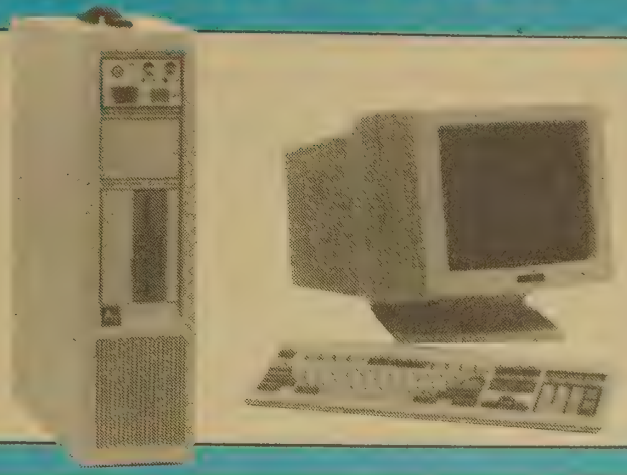

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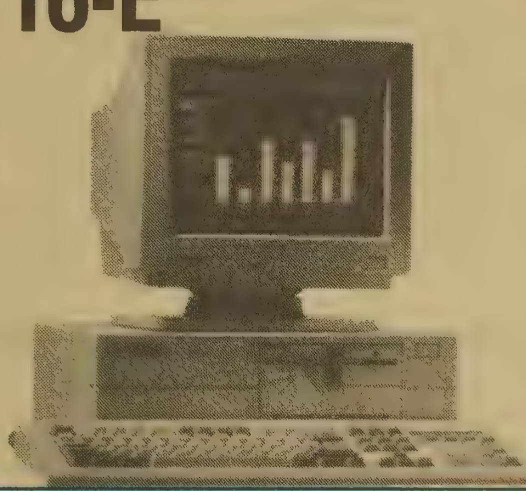

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Seagate ST-138	269
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Miniscribe 3650	299
Micropolis 1325A	549

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Paradise EGA 480 Card	199
Genoa VGA 5100	299
Genoa VGA 5200 Hi-Res	425
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Caspar 5156 VGA	$335
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MAC @ WORK

Bytes and Pieces

BMUG isn't used to begging, but we are a non-profit organization. To keep supplying you with accurate, trustworthy, slime-free information, we need the help of some generous Angels. It's hard to rely totally on the generosity of our volunteers and membership dues to keep growing and kicking. We need funding for special projects and publications.

BMUG is looking for three or four 386 PCs to better test and evaluate mixed networking products. We're wishing hard for our own NeXT, Sun, H-P, Apollo, or even a MicroVAX machine as well. If you're upgrading to some new flavors of Mac, we'd love to be graced with your classic hand-me-down. We need your help to keep helping!

- The three-ring circus of BMUG, the MacToberFest, is coming October 24, at the University of California's Pauley Ballroom, Berkeley. BMUGers show each other their software mastery, vendors answer questions, and there are plenty of raffle prizes. After the ball we'll have a special speaker—John Sculley! You'll be Blue, if you're not at the Fest.
- Check out the BMUG booth and say hello to fellow members at the Mac Business Show, November 29–December 1, Long Beach, California.

Shareware Spotlight

If you're getting started in *HyperCard* and would like to know more about the great animation you see in stacks, check out *Animation Help 1.07r.* It's a clear way to see and learn the principles of the many forms of Hyperized animation. There are examples of each kind with some guidelines. The 596K stack was written by Jeremy Ahouse, who was BMUG's Hyper SIG leader, until he got a job with the *HyperCard* development team and skipped town.

It's on BMUG *Hyper Graphics* 11 disk. ■

Upcoming Events

10/12	Generic Software's CAD Stuff.
10/19	Xerox Imaging Systems—*AccuText* (OCR); Berkeley Systems—*OutSpoken.*
10/24	BMUG MacToberFest.
10/26	Design Science—*MathType;* Cultural Resources Inc.—*Culture 1.0.*
11/2	Relax Technologies (hard disks); Cayman *GatorBox* (networking).
11/9	IBM/Sears—Prodigy.
11/16	To Be Announced.
11/23	No meeting.

What Is BMUG?

BMUG is a non-profit educational corporation, promoting the exchange of information. Like any growing organization, it is many different things to its 7000+ international membership.

BMUG, Inc. is a computer user group located in Berkeley, California. The group specializes in computers using a graphical interface. For a while that meant the Apple Macintosh but now includes other makes, models and operating systems, including the NeXT best thing. BMUG supports many Special Interest Groups (SIGs), a eight-line Bulletin Board System (BBS), free HelpLine, software library, weekly meetings, and much more. BMUG also puts out a semi-annual 400+ page book that we call our "newsletter."

Our motto continues to be: *We're in the business of giving away information.*

Come and join in the dialogue at the BMUG main meeting every Thursday evening, 6:00 to 9:00 (or whenever we finish), in the Physical Sciences Lecture Hall on the U. C. campus.

The BMUG HelpLine, (415) 849-HELP, and our fax number, (415) 849-9026, provide technical assistance and telephonic hand-holding during business hours (11:00 am-5:30 pm). If your question can't be answered on the spot, we try get you in touch with someone that can help. Of course, not every problem can have a happy ending—but we try.

BMUG has one of the most up-to-date, comprehensive software libraries around with 400+ double-sided disks filled with the latest versions of public domain or shareware programs and *HyperCard* stacks. New disks are unveiled almost every week at the Thursday general meeting. BMUG also brings you the *PD ROM*™, our entire library and more on CD-ROM—according to Apple, it's the best selling CD-ROM!

Our BBS offers many of the latest versions of files in our software library as well as news, private mail, rumors, etc. The BMUG BBS is part of the worldwide EchoMac Network on FIDOnet (161/444); by calling a local FIDOnet BBS in your area, you would then be able to get in touch with us wherever you are, as well as send mail to users everywhere! BMUG is now a part of the international USENET network (apple!bmug!user.name@sun.com) or (user.name@BMUG.FIDONET.ORG). With our multi-line capability you are now able to have access to BMUG almost 24 hours a day. It's easy to use, fun, and a great resource.

To get some further information about BMUG please write to: BMUG, 1442A Walnut Street #62, Berkeley, CA 94709. If you prefer to phone our business office call (415) 549-BMUG, or FAX (415) 849-9026.

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Meeting address ______________

Meeting time/day ______________

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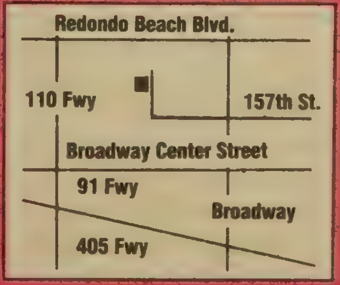

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USER GROUP NETWORK

BY MARY EISENHART

Osborne In Pasadena, Pournelle On GEnie, BBSes Everywhere

Before we get to the deluge of BBS listings we've received this month, a pointer to user group activity: **Adam Osborne** will be speaking September 20 on the Caltech campus in Pasadena. The occasion is the meeting of the **Pasadena User Group**, and Osborne will address the subject "Artificial Intelligence Today: Where Is It Going?" Osborne's company, Paperback Software, offers an expert systems package called VP-Expert, which will probably figure prominently in the discussion.

Osborne is a man of strong and forcefully-expressed views, not one to mince words, and his presentations are both entertaining and enlightening. So head on down to Pasadena and check it out. You can get the specifics on the meeting time and location by calling **Steve Bass** at (818)795-2300.

Science fiction enthusiasts in the group will be interested in knowing that computer columnist and sci-fi author **Jerry Pournelle** is now hosting his own roundtable on **GEnie**. In addition to talking about computers and online services, Pournelle will hold forth on the state of science, politics, and sociology. Since Pournelle is also one of the industry's more opinionated and forceful observers, and rarely at a loss for words on any subject, this is likely to be some pretty interesting stuff and the source of a few good arguments.

For information on joining GEnie, which has many other forums as well, call (800)638-9636.

LA must be a modemer's paradise, because it seems like every month we're getting more and more BBS listings. **Larry Dighera** of Santa Ana sent us email via UUCP to tell us about his **Consultants' Exchange BBS**, which operates 24 hours a day at (714)842-6348 and (714)842-5851. It's intended as a resource for information and contacts among programmers, consultants, VARs, and other industry professionals. It offers Usenet access to a worldwide network of UNIX sites, as well as help-wanted and services-offered listings. So if you're a consultant who feels the need for a wider network of contacts, this might be a good place to start.

On a similar note, **Daniel Bender** of Monrovia sends a fax informing us of his free BBS, **Job-Line**, (818)358-1647. It is, he says, "a not-for-profit system dedicated to helping employers and prospective employees find each other."

Kathy Wooton would like to announce the arrival of **The Feminine Connection BBS**, a women-only board that offers many public message boards, email, a software library, and both public and private chat capabilities. It operates 24 hours a day at (213)326-8694, at 300/1200/2400 baud.

Bryce Lynch in West Hollywood has an all-Amiga board called the **Delphi Network**. It offers 80 megabytes of downloads and a user-friendly interface to message SIGs on many subjects. Access is free, but registration is required.

Amiga users, Bryce really wants you to call his board. He says, "If I don't get more callers I'll be going to the great BBS graveyard in the sky!" A board is a terrible thing to waste, so fire up your modem and call (213)652-6095. Parameters are 8-N-1, 300/1200/2400 baud, and the board operates 24 hours a day. Bryce is standing by...

That's all for this month, but we're always anxious to hear what your group or board is up to. So keep those cards, letters, faxes, and email messages coming. Send US Mail to MicroTimes User Group Network, 5951 Canning Street, Oakland, CA 94609. Send email to **microx** on The WELL (415/332-6106), uucp **{pacbell, hplabs, ucbvax, apple}!well!microx**, and **MICROTIMES** on MacNET. We cheerfully accept faxes at (415)652-4618 and (213)467-5486. ■

Bulletin Boards

INTERNATIONAL

Cassia Express. (065)344-9163. 300/1200/2400 24 hrs. Singapore. Sysop: N.M.Rahman.

FidoNet Argentina (054). (011)541-22-419. 8-N-1 3 PM-11 AM PST. The 1st fido node in Argentina has over 450 subscribers. Specializes in issues from S.A. PD software library to d-load. Sysop: Pablo Kinman.

Janis II. (03)255-8856. 24 hrs, 1200/2400/9600. Japan Newsbytes, USA Today, InfoMat magazine, Online Digital Music Review. Over 500 megs info & D/L Pgms on HDD. Sysop: Pete Perkins. Voice: (03)255-8880.

Remote Bulletin Board (Singapore). (065)445-1646. 9600/2400/1200 24 hrs. 218 MB Online (IBM upload/download). Sysop: Umar A. Rahman.

203

Terrapin Station. (203)656-0134. Grateful Dead Board. Sysop: Klaus and Gretchen Bender.

209

Bertha Board BBS (209)239-9853, 300/1200/2400, 8-N-1, 24 hrs. MS-DOS, others. 95 Mb online. Emphasis on programming. Uploads and downloads. No fee but registration required. Sysop: Kenneth Roach.

Don's Dental Service. (209)239-4828. 8-N-1, 24 hrs, 1200/2400. On-line dental supply catalogs, No. CA Society schedules, post-graduate course schedules from UCLA, UOP, and Cal. Free. Sysop: Don Carlson.

Oasis Software Library (209)823-2803, 300/1200/2400, 8-N-1, 24 hrs. Shareware and PD for IBMs and compatibles. No fee but registration required. Sysop: Tim Campi.

Silicon Realms. (209)754-5530. 300/(1200 Soon)9:30AM to 6:30AM. Formerly Motherload 64. Commodore, PET & Plus/4. Programmers board, Continuing & Short Story boards, FRPG. Sysop: Joe Commodore.

SMERDON'S CASEL (California Attractions, Sights and Entertainment Listing) (209)521-4910, 8-N-1, 24 hrs., 300/1200/2400. Information on over 700 things to do and see in California. Free. Sysop: Sharon Smerdon.

The Backdoor BBS (209)952-9430, 300/1200/2400, 8-N-1, 24 hrs. MS-DOS oriented board. Lots of software, online chess game, much more. Sysop: Randall Fox.

212

Lawyers Linked by Modem. (212)766-3788. Three hundred registrants. A BBS for law-related material. Sysop: Rees Morrison.

RadNET OnLine Services 24 hrs. Online computer network for Nuclear Medicine professionals. Offered through Compuserve. Regular on-line conferences. Call for information and registration. Voice phone: (212)856-6449.

213

Ann Leung's Best Buys. (213)372-4050. Realestate in LA South Bay. Best buys are compiled daily by Gloria Kung. Type GO BEST upon entry.

Ashton-Tate Support. (213)538-6196. Free technical support, answers to questions about Ashton-Tate software products.

Backroom BBS (213)420-7622, 8-N-1, 24 hrs., 300/1200/2400/9600. Very Mac, also Apple II and MS/DOS. Direct access to Applelink, but not by user.

Beaver Creek. (213)437-1410. 8-N-1 All but 4-9 PM. Sysop: John Campbell.

Beta RBBS. (213)393-9777. 1200/2400. Free entertainment BBS. Audio, video, DJ, music, movies, news and discussions. Sysop: Jason Lin.

Career-Point Information (CPI) (213)423-4999, 24 hrs., 10 lines on rotary. CD-ROM, INFO-MAT Magazine, USA TODAY, Writer's Board, Online Shopping and CHAT. "Where the professional & BBSing come together!" Over 1400 active users. Sysop: Mark E. Bishop. Voice: (213)428-0363.

Century Computers Amiga BBS. (213)697-2004, 24 hrs, 1200/2400. Sysop: Philip Marhqrst. Voice: (213)697-6977.

Chastity's Bistro. (213)656-3060. 300/1200/2400. 13 lines under DLX BBS software, private chats, 40 different channels for group chatting, message bases, file library, database system, a user matchmaker, user profile browsing. Must be over 18, voice verified.

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Computer Kenny Fax Bulletin Board. (213)436-3601. 6:30 pm to 10 pm, M–F; 5 am to 8 pm, Sat–Sun. Services for Lotus 1-2-3 version 2.3; services for word processing, databasing, and special work from fax to fax. Sysop: Kenneth Fonsec.

CONTEL. (213)372-4050. Job opportunities in computer maintenance/service, job openings national/international. Type GO DSSD upon entry.

David's Amazing BBS. (213)459-5891. Conferencing (like the Well, but easier to use). Electronic bar; talk; matchmaking; 5 lines; unique software. Sysop: David Dennis.

Delphi Network. (213)652-6095, 8-N-1, 300/1200/2400. A new BBS serving the interests of the Amiga community. 80 megs on line. Free access, registration required. Sysop: Bryce Lynch. Voice: (213)657-4946.

Dial-Your-Match. (213)461-9899. Hollywood. (213)467-6776. Hollywood. (213)539-2448. Lomita. (213)633-4349. Downey.

Easy Reader Electronic Edition. (213)372-4050, 8-N-1. Free online publication. Includes movie times, editorial, 500 new classifieds each week and more. Online ordering of classifieds and letters to the editor allowed. Sysop: American TeleWeb.

Fly-In French Connexion. (213)470-6457. 24 hrs, 300/1200/2400. On-line games for 7 to 77, files to download, messages, classifieds. Sysop: Patrick R. Reiset. Voice: (213)470-7621.

Fly-in French Connexion. (213)470-6457, 24 hrs, 300/1200/2400. Games, downloads, messages, classified ads, free access to all sections on the first call. Sysop: Patick R. Reiset.

Graphic Encounters BBS. (213)439-9000. 8-N-1, 24 hrs., 300/1200/2400. First logon requires password "computer." Email, MIS employment, graphics, CHAT, technical information, Oracomm, Sysop Corner. Operating 6 lines. Sysop: Bill Bloomer. Voice: (213)439-3135.

Grey Matter BSS & RCP/M. (213)971-6260. 300/1200/2400 24 hrs. Televideo and Timex/Sinclair support. Sysop: Ed Grey.

Hack Shack BBS. (213)867-4867, 8-N-1 noon to midnight, 300/1200/2400. PC software, hardware orientation. Sysop: Wally. Voice: (213)604-8739.

Home Loans BBS. (213)372-4050, 8-N-1, 24 hrs., 300/1200. Daily update of mortgage rates. Voice: (213)316-5508.

Homer. (213)490-0436. 24 hrs. Home automation, science, and general interest. Sysop: Rick Ellis.

ICN. (213)204-0646. 2400/1200/300 24 hrs. The place to buy/sell/trade collectibles (stamps, books, etc.)

Information Symposium. (213)258-5086. 300/1200/2400 8-N-1 24 hrs. Serving the Info. Professional, Tech. Info, M.I.S. Employment. MS-DOS; OS/2; graphics. Password req'd for access is "Micro." Sysop: William Bloomer.

KBBS. (213)672-8839, 558-0145, 654-7833. 8-N-1 300/1200/2400. 17 lines, LA's best Adult Social BBS. Free trial period, worldwide network, databases, USA Today news, group chat. Sysop: Dale Sys-Dude.

King & Queen Of Hearts BBS. (213)461-9899. 8-N-1, 24 hrs., 300/1200/2400. Multi-user, multi-interest, public/private chat, D/Ll & U/L. For IBM/Commodore. Adults only. Sysop: Bob Overstreet.

LA JOBS. (213)372-4050. Los Angeles' most extensive database of Eng./tech jobs openings. Email direct to employers. Service provided by Los Angeles employers. No agencies. Type GO JOBS upon entry.

LAAUG-LINE .(213)559-7367, 24 hrs. Bulletin board of the Los Angeles Amiga Users Group. All Amiga owners are invited to join in the message base. Only LAAUG members may download files. Sysop: Gary Woolard.

Loan Line. (213)372-4050 Type GO LOAN upon entry. Voice: (213)316-5508

Lynzie's Motherboard. (213)650-0519. 300/1200/2400/9600 8-N-1 24 hrs. Matching, group and private chat system, local social events. W. Hollywood. Sysop: Lynzie Flynn. Also: (213)390-3239, 659-1982.and 9600 baud 650-1233.

MacUnderground. (213)326-4222. 24 hrs., 300/1200/2400. Macintosh only. News, reviews, apps., 80 megs online, updated weekly, full Mac support. Sysop: Tim Byars.

MEDCOM INFO BBS. (213)644-5580. 24 hrs., 300/1200/2400. Multi-user games, chat, computer art, PC-Pursuit access & info, news IBM-PC freeware/Shareware & mail.

MixNet. (213)661-1207, 8-N-1 1200/2400. Beta users wanted—no files—a self-organizing collective intelligence. Think globally, act locally—VT100. Sysop: Roger Eaton.

Mt. Hollywood Christian BBS. (213)666-6937. 8-N-1, 24 hrs. Sysop: John Janssen. Voice: (213)664-2302.

Ocular Skisis BBS. (213)596-9467, N-8-1, 300/1200/2400. A BBS devoted to eyecare and vision. Open to the public and free. Free consultations. Sysop: Michael Larkin, O.D.

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On The Water Front, (213)306-2581, 8-N-1, 24 hrs., 300/1200/2400. Programmers Clipper conferences and files, dBASE C, Lotus, etc. Free. Sysop: Bill Bird.

Online Goldmine. (213)860-5649 for 300/1200; (213)860-3570 for 1200/2400. 7-EVEN-1 24 hrs. Classifieds, electronic yellow pages, messaging, trivia, and horoscope. PRESTEL Graphics protocol available upon registration.

Online Vacation Rentals. (213)372-5133. 8-N-1, 24 hrs., 300/1200/2400. Listing of vacation rental property available for your next vacation! FREE property searches. List your rental for a small monthly fee. Sysop: David S. Barks. Voice: (213)374-8423.

ORCHID. (213)372-4050. Technical job opportunities. Direct access to employers. We are not a job agency. Type GO JOBS upon entry. Sysop: Mindey.

"Our" House BBS. (213)937-4830, ADULTS ONLY! 7 user online chat. Full access first call. SIGs, matchmaker, downloads. A "Friendly" bbs. Sysop: Michael Farkas.

Planet Zed. (213)434-2933. N-8-1, 24 hrs., 300/1200/2400. Planet Zed is a music oriented BBS with room for all! Features up to the minute IBM shareware. Sysop: Mike Zed.

Rockwell. (213)372-4050. NAAO job opportunities in El Segundo. Many Eng./tech openings, email direct to Rockwell. Type GO NAAO upon entry.

SBCUG BBS. (213)545-8653. Fort Knox (408)335-4229 24 hrs., 300/1200/2400. New board, growing message base and file library with online games. Future direction awaits your input. Sysop: Tim Bowden.

SCENIX West Network. (213)372-2282. 16-line multi-user data communications network. LA & South Bay entertainment & regional services information, USA Today, SCENIX express travel service, on-line catalog, email & real-time conferencing. Sysop: Sally. Voice:(213)376-5753.

South Bay Love Connection. (213)422-7693 24 hrs., 300/1200. Matchmaking, networking, general interests, adult interest areas, 10 subboards. Sysop: Lisa Townsend.

Southland News. (213)402-4079. 24 hrs. An online newsmagazine w/ general news, comments, entertainment, computer news show, club & swap meet listings.

Telecommuters Express BBS. (213)863-3742. Support for IBM PC, Mac, Apple II, Amiga, Commodore, and the DEC/VAX system. Sysop: Shirley and Pat Tafoya. Voice: (213)862-4687.

Teleweb South Bay. (213)372-4050. Los Angeles 213 access number.

The Alternative BBS. (213)439-7044. Programmer and user forums. UP/DL. Serious PC enthusiasts or professionals only please.

The Dharma Wheel. (213)777-6328, 8-N-1, M–Th, 6–10 pm, 1200. Mostly Mahayana, C128, Dragonfire BBS software. Sysop: Fonzy J. Broussard.

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The Midnight Express. (213)874-1022. 300/1200 24 Hrs. Unlimited email, Land of SPUR. Modifies GBBS Pro System. Games, stock exchange, quizzes and surveys. Sysop: Justin Case.

The Modem's Delight. (213)944-1221, 8-N-1, 24 hrs, 300/1200/2400. A multi-interest BBS system using Wildcat version 1.03. Sysop: Ron Dishon.

Time-X-Change. (213)329-3922. 300/1200 8-N-1 24 hrs. Timex-Sinclair & CP/M users. Free Sysop: Dave Clifford.

Westside. (213)933-4050. 3/12/2400 8-N-1 24 hrs. 17 lines w/chat, library, matching. Public & email.

Zorin Online Services. Online product information service offering keyword searching of over 50,000 products and services ranging from electronics, communications and hardware to complete systems, software and other areas. Fee and registration. Sysop: Zorin Data Systems. Voice: (213)399-3804.

214

Roundabout. (214)407-0655 8-N-1, 300/1200/2400. BBS for Dallas chapter of NAAFA, an organization dedicated to fighting discrimination against fat people.

216

Electronic Media Network. (216)241-2612. 1200 8-N-1 23 hrs. Provides link between employers and high-tech and highly skilled professionals.

305

Legal Access BBS. (305)473-9784. Ask a lawyer legal questions, discuss contemporary issues, hold mock trials, peruse summaries of Supreme Court cases. Florida. Sysop: David Danzig. Voice: (305)472-3621 eves.

312

Feminist BBS. (312)383-2059. 300/1200 24 hrs. Lively discussion, everyone welcome. Michelle Frost.

408

A32 BBS. (408)263-0299. 300/1200/2400. 24 hrs., All Macintosh, Red Ryder Host, email, news and files (40 megs). Mac disk libraries for sale. Sysop: John Griffen. Voice: (408)263-0398.

A32 User's Group. (408)263-0299. 2400. Disk libraries for sale.

Amiga Exchange. (408)375-1823. Amiga, Commodore. Runs Opus.

AMME jr. (408)899-1219. Commodore. CBM color/graphics.

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Byte Bandits of America. (408)374-3974. 300/1200 24 hrs. Free. MS-DOS Sysop: Sam C. Brown.

Campbell Chapter of 64/More Commodore. (408)946-6154.

Cats, etc. (415)537-2329, 8-N-1 24 hrs, 1200/2400. A BBS for thinking people.

Comp-U-Ease. (408)286-8332. 24 hrs. Multi-line, engineering, ACAD, LAN. No games or picture files. Sysops: Stuart Smith and Ed Hwang.

Computer Classifieds. (408)253-4280, 8-N-1, 24 hrs, 300/1200/2400. Select ads by classification or key words. Reply on line to advertiser's electronic mail box. Sysop: J. E. Doll.

Computer Tyme Gap BBS. (408)732-2353. 2400 24 hrs. 7 days a week. Alpha site for Gap BBS software. Sysop: Gary Araki.

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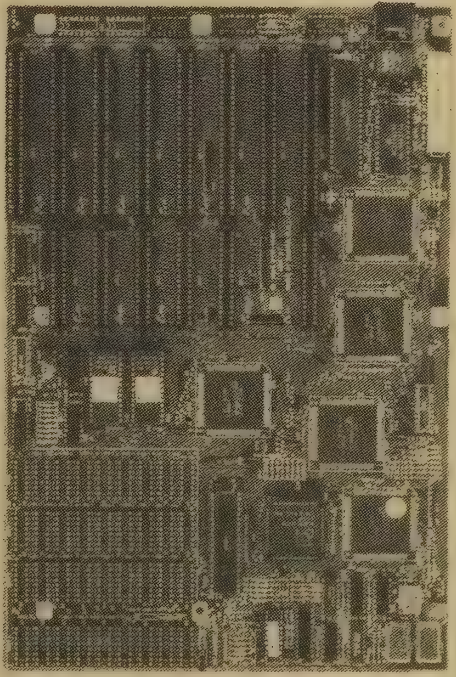

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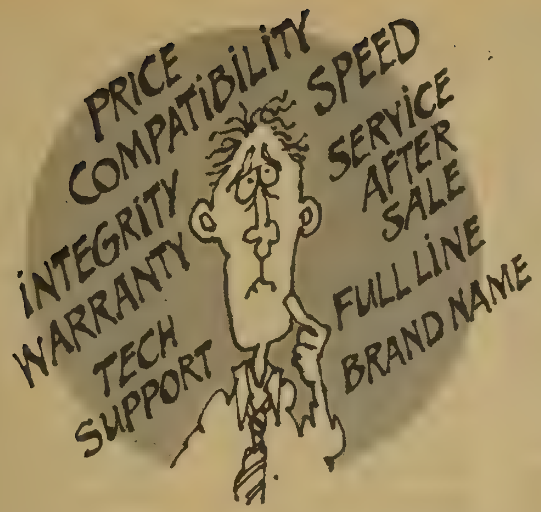

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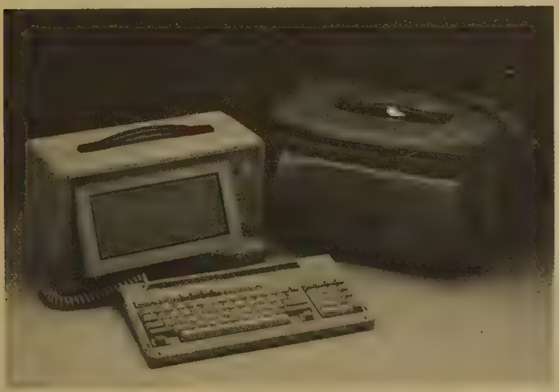

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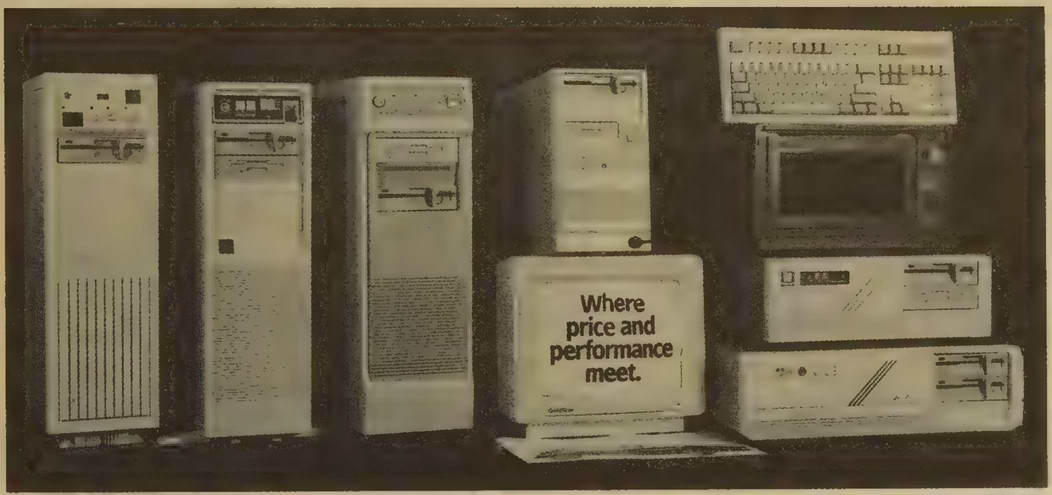

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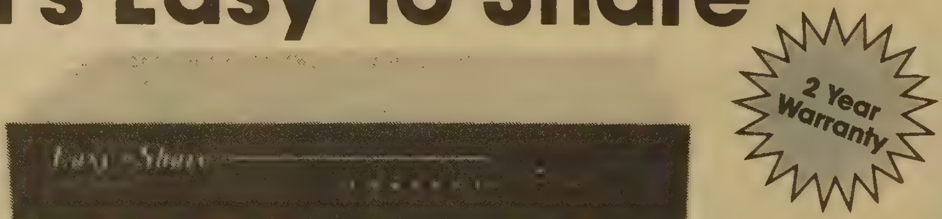

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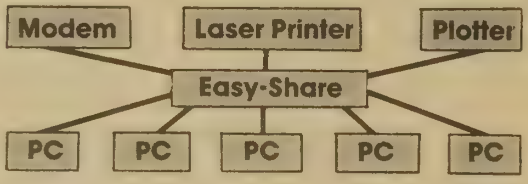

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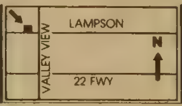

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PC-RAILROAD (210) Trains run on ready-made routes or design your own. You have total control. Requires CGA.

CARD GAMES (214) Draw Poker, Hearts, Canasta and Bridge.

ARCADE GAMES #5 (220) Rockets, Snake, Xonix, Nemon, Spacewar. Needs CGA.

FAVORITE GAMES (221) Pango, Qbert, Frogger, Packman, 3-Demon, Babies. CGA.

CLASSIC GAMES (222) Pinball, Breakout, Flightmare, Ratmaze, Space Commander. Needs CGA.

ADVENTURE GAMES #1 (228) Sam Spade, Castle Adventure, Pleasure Dome.

GAMBLING GAMES (229) Blackjack, Poker, Roulette, Craps. CGA.

BOARD GAMES #1 (230) Monopoly and Risk. Requires CGA.

MONOCHROME ARCADE GAMES (243) Horserace, Beast, Skiing, Fire Fighter, Depthcharge.

MAJOR LEAGUE BASEBALL (203) Super baseball game. Neat graphics. CGA.

BOARD GAMES #2 (231) Checkers, Chess, Dominoes, Backgammon. Needs CGA.

BOARD GAMES #3 (245) Scrabble, Concentration, Bye Bye Boris, Seek & Sink. Requires color monitor.

ADVENTURE GAMES #2 (246) McMurphy's Mansion and Empire.

STRATEGIC WAR GAMES (226) War on the Sea, Tank, African Desert Campaign.

KINGDOM OF KROZ (244) Unique arcade-adventure game. National prize winner.

ARCADE SPORTS GAMES (223) PC-Pool, PC-Bowl, Archery. Requires CGA or EGA.

ARCADE GAMES #1 (216) Spiders, Tank Wars, Disk Crash. Requires CGA.

ARCADE GAMES #4 (219) 3-D Ball, Zapshot, Batali. Requires CGA.

PINBALL GAMES (225) 10 pinball games for 1-4 players. Requires CGA or EGA.

ARCADE GAMES #2 (217) Striker and Reflex Point. Requires CGA.

ARCADE GAMES #3 (218) Round42, Willy the Worm, Sopwith. Requires CGA.

WORTHY OPPONENT (247) New! 4 great games. Compete at home or by modem. Requires color monitor.

FORD SIMULATOR (211) New! Exciting driving simulator from Ford. Test your skills on 4 tracks. Needs CGA or EGA.

ASSORTED GAMES (224) Paratrooper, Pitfall, & Quarterback. Needs CGA.

WHEEL OF FORTUNE & LAWN MOWER (227) Two great games for any monitor.

WORLD OF EAMON (240) Classic role-playing fantasy game.

TRIVIA (234) Trivia game, 1500 questions, 4 categories, game clock, & options.

GAME MAKER (241) Create your own adventure games. No programming required.

EGA ARCADE GAMES #1 (251) Aldo, Ega-Breakout, Egaroids. Requires EGA.

EGA ARCADE GAMES #2 (252) Snarfs and Ega-Star Trek. Requires EGA.

EGA FOOTBALL (257) New! You control the action. Plays like real football game. Needs EGA.

EGA GOLF (250) 18 holes of the best scenery available. Requires EGA.

BASS TOUR (258) Feature-packed fishing game. Select rod/reel/bait/etc. Use any graphics monitor.

EGA BOARD GAMES #1 (253) Mah Jongg and Risk. Needs EGA.

EGA BOARD GAMES #2 (254) Othello & Sorry. Needs EGA.

BUSINESS & FINANCE

BUSINESS ACCOUNTING (1902) Complete A/P, A/R, G/L, Payroll.

ZIP CODE FINDER (1900) New! Computerized Zip code book. Lightening fast search.

UPS MASTER (1955) New! Complete UPS shipping program. A real time saver.

FASTBUCKS (1903) Fast, easy, complete home finance package. Requires graphics card.

FLODRAW (1904-1905) (2 disks) Total flowcharting system. 320K, CGA or EGA.

PC-MAIL (1911-1912) (2 disks) Easy, powerful mail list manager. Menu-driven.

SOLVE-IT! (1919) Over 20 menu-driven financial calculations.

EXPRESS CHECK (1922) Great check book mgr. Menu-driven, prints checks & reports.

TICKLEX (1926) Most powerful Tickler-Calendar-Scheduler for 1 person or office.

ASSET ORGANIZATION (1927) Complete personal asset manager.

EASY PROJECT (1932) Total project manager. Gantt charts, reports.

ASC IN-CONTROL (1952, 1953) (2 Disks) New! Sales prospecting/tracking, billing/activity scheduling, auto-dial, mail labels, more.

FONE (1954) New! Price your phone calls while you're on the line & save money.

PACTAX (1956) New! Tax planner from a CPA. Accurately estimate 1989 income tax.

BUSINESS FORM LETTERS (1936) 100 common business letters. Fill in the blanks.

DATABASE

FILE EXPRESS 4.xx (1002-1003) (2 disks) Easy, powerful database. PC-Magazine said it "performs like a thoroughbred."

PC-FILE + 2.0 (1009-1011) (3 disks) New version. Jim Button's relational database masterpiece.

THOUGHT ORGANIZER (1013) Text-based database organizes data and thoughts.

dPROG (1022) Fantastic dBASE III auto-programmer writes all the code for you.

WAMPUM (1006, 1007) (2 disks) Superb, full-featured dBASE III clone. Requires 512K, hard disk.

dFLIPPER (1025) New! Directly edit dBASE & compatible files from DOS.

PC-FILE.db (1026-1028) (3 disks) New! Jim Button's latest. All the power plus dBASE III compatible. Requires 512K, hard disk.

PROGRAMMING

A86 and D86 (1403-1404) (2 disks) Finest macro assembler & debugger. Lightening fast. Rave reviews.

EBL & OPAL (1407) Two fantastic batch language processors. Super-charge your batch files.

ADVBAS (1413) The best Basic programming aid. Advanced function library, windows.

SCREEN DESIGNER (1431) New! Exciting feature-packed screen designer for batch files & most programming languages. Needs 384K.

HOUSEHOLD

GARDENER'S ASSISTANT (1809) Plan your garden in every detail.

VIDEO LIBRARIAN (1812) Catalogs your video tape library. Menu-driven.

SHOPPERS ASSISTANT (1816) Easy grocery shopping and coupon filer.

COMPUTER CHEF (1817-1818) (2 disks) Complete cooking program. Loaded with recipes.

MEALMATE (1821) Excellent! Nutrition and meal planning for dieters.

ROLODEX (502) Like ROLODEX. Rotary index card file system w/search, label printing, and more.

SPREADSHEET

AS EASY AS (902) Great Lotus 123 clone. Latest with 256x1024 grid. Does almost every Lotus function.

QUBECALC (903) Unique, powerful 3-D spreadsheet. View your data as never before.

LOTUS TEMPLATES (907) Ready to run. Requires Lotus 123.

LOTUS MACROS (908) Saves loads of time. Requires Lotus 123.

123 POWER WORKSHEETS (911-912) (2 disks) 13 powerful worksheets for Lotus 123.

PC-CALC + (914-916) (3 disks) Jim Button's latest. Powerful and easy to use.

EZ-SPREADSHEET (917) New! Easy! Become a spreadsheet pro in less than 20 min. 64 columns x 512 rows.

EDUCATION & TUTORIALS

WORDPERFECT LEARNING SYSTEM (353, 354) for 4.2. **(355, 356)** for 5.0.

COMPUTER TUTOR (302) Complete interactive DOS and computer tutorial.

EASY DOS (305) Two great programs make using DOS very easy.

PC-FASTYPE (311) The very best interactive typing instructor. Requires CGA or EGA.

BASIC TUTOR (329) Three programs to learn basic programming.

THE PRESIDENTS (341-342) (2 disks) Super biography & quiz system on U.S. Pres.

FOREIGN LANGUAGES (344) Menu-driven tutors: Spanish, French, German, Italian.

COMMUNICATIONS

PROCOMM (1700-1701) (2 disks) Newest. All features, menu-driven. Top rated.

TELEDISK (1713) NEW! Converts entire diskette into a compressed file for faster transmission.

GRAPHICS

GRASP (1605) Create and run fabulous graphic demos. Any graphics card.

PC-KEY DRAW (1607-1609) (3 disks) Powerful drawing/CAD program with clip art. CGA, EGA or Hercules with CGA emulator.

OPTIKS (1619) Edit, merge, convert files from over 24 different graphic formats.

FINGER PAINT (1620) Like PC-Paint brush. Requires graphics card.

VGA PAINT (1622) New! Graphics/drawing in 248 colors. Requires VGA, 450K.

PRINTMASTER GRAPHICS (1602, 1603) (2 disks) 1,080 great Printmaster graphics.

PRINT SHOP GRAPHICS (1663, 1664) (2 disks) 1,080 graphics for Print Shop.

VGACAD (1625) 256-color drawing program. Many features. Needs VGA.

MISCELLANEOUS

MICRO WORLD DATA BANK (2608-2612) (5 disks) Ultra detailed world mapping. Produced by the CIA. Needs CGA or EGA. Features 2 types of mapping.

PIANOMAN 4.0 (2202) Play and compose music. New update is better than ever.

SCICALC (2304) 250 menu-driven math & physics tools with unit conversions. Need CGA or EGA.

WORLD (2600) Stunning! Feature-packed world map with zoom. Needs CGA or EGA.

ASTROLOGY 9.5 (2701) Complete, accurate chart calculation.

LOTTO BUSTER (2130) Lottery program that really works on any pick-6 or pick-7 lottery.

PLANETS (2605) New! Great astronomy program. Requires graphics card.

WISDOM OF THE AGES (1216-1218) (3 disks) New! 6500 quotes on 81 subjects from history's greatest minds. Inspiration for thought & writing.

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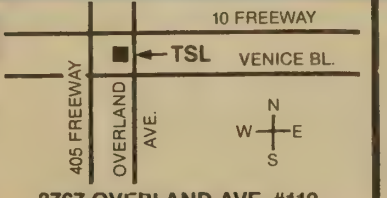

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916

24th Street Exchange. (916)451-7179. 300/1200/2400 8-N-1 24 hrs. Opus-based system. Free access. Lge. selection pub. domain files for IBM & compatibles. Special interest areas. Sysop: Don Kuhwarth/Laura Stua.

Adult Contacts. (916)338-4909. 300/1200/2400. 24 hrs., Where mature adults meet to socialize and to exchange ideas & information. On-line matching games, files, info bulletins, messages, and lots of FUN! We especially cater to the new female user. No minors or techno-babble allowed.

Apple Sac BBS. (916)781-6645. For Macintosh. Official board of Apple Sac. Sysop: Tim Dugas.

Apple Sac BBS. (916)966-3620, For Apple II, IIe, IIc, and IIGS. Official Apple II board of Apple Sac. Sysop: Apple Lew.

Changewinds HST. (916)923-3862. 24 hrs., 300/1200/2400/9600. This system specializes in keeping the highest quality files online. TradeWars 1000 v9.03, 18 MHz system, many echomail conferences. Sysop: Ron Deaver.

CompuHelp. (916)786-3923. 24 hr database-bulletin board system for the Blind and Visually Impaired. Sysop: National Association Of Blind And Visually Impaired Computer Users, Inc.

Dial-Your-Match. (916)275-1265. Redding. (916)736-0739. Sacramento.

Hackney's Hideout BBS. (916)961-1042. 1200/2400 8-N-1. Includes AT&T users conference. Sysop: Rich Hackney.

MacNexus BBS. (916)448-5348, 8-N-1, 24 hrs, 2400. Message portion open to general public. Sysop: Bill Davies.

Night-line Network Central. (916)427-1107, 300/1200, 8:00 PM to 8:00 AM daily. Forum for individuals, clubs and organizations that want to network nationally with others. Sysop: Eric Thomas.

Phoenix Landing BBS. (916)966-8243. 300/1200/2400. Macintosh oriented but many other computers are supported. File areas for Mac and other computers. Supports echomail conferences including ECHOMAC and BAYMAC.

User Groups

AMIGA

Amiga Friends. Meetings: 3rd Sun. Rancho Santiago College, Rm R-124, 17th & Bristol, Santa Ana. Call for current meeting info: (714)775-7237 (24 hrs.)or write: P.O. Box 4186, Huntington Beach, CA 92605.

Amiga Special Interest Group. Meetings: 1st Sunday except holidays. Chapman College, 333 N. Glassell, Orange, CA. Amiga SIG is part of the North Orange County Computer Club, a thousand member organization together 12 years.

Amiga User's Group Of Long Beach. Meetings: 3rd Sundays, 1 pm, Mid-Cities National Bank, Lakewood and Artesia, Bellflower. Tech, Beginners, Video/Graphics SIGs. (213)422-8226/432-2088.

Bits & Pieces Amiga Group of Anaheim. Meetings: each Tues. 6:30-10 PM 1130-A North Kraemer Blvd., Anaheim, CA. DOS Classes, tech. help & more. BBS: (714)630-8897.

LAAUG-Los Angeles Amiga Users Group. Meeting: 3rd Wednesdays @ 7:30 PM. Veteran's Auditorium at Overland Ave. & Culver Blvd. Many SIGs, Rookie, music, video, monthly PD disks.

Pacific Computer Club. Meetings: 2nd Thurs. 7 PM 391 S. Madison, Pasadena, CA.

San Fernando Valley Amiga Users Group (SFVAUG). Meetings: last Tuesdays, 7 pm, The Meeting Room, Fallbrook Mall, 6507 Fallbrook Ave, Canoga Park. Call: Tony, (818)985-0476.

South Bay Amiga Dudes. Meetings: 3rd Thursdays, 7 pm, Redondo Beach Blvd., Lawndale. Call: Charlie Breene at (213)540-2834.

South Orange Commodore Klub (SOCK). Meetings: 3rd Saturday 9:00 A.M. Union Savings, 23688 Ei Toro Road, El Toro, CA. For Commodore 64/128 users and Amiga users. One-hour general meeting is followed by separate group meetings for each.

AMSTRAD

Amstrad Users Club Of Orange County. Meetings: 3rd Saturdays, 10 am til 2 pm. Board Room upstairs in the Santa Ana Library, Civic Center & Ross Streets. For more information call: (714)953-6471.

Amstrad Users Group, USA. Meetings: Free mail and phone support for PCW. 12741 Matteson Ave. #3 LA 90066. (213)397-7981.

APPLE

Apple/Valley Computer Club. Meetings: 2nd Wednesdays, 7:30 pm, Valley Presbyterian Hospital, meeting room #3. Discussion on Apple, Mac, Amiga, IBM. BBS: (818)782-6471. Up loading/down loading. Visitors welcome. Eamon games, misc. Voice: (818)988-1752.

Original Apple Corps. Meetings: 2nd Sun. 12:00 Noon 3rd Floor Community Room, Santa Monica Mall. First Apple group ever. SIGs for AppleWorks, Telecomm, Educators, Macintosh. Call Fred Duffy at (213)396-5515.

Tri-City Apple Users Group. Meetings: 3rd Thurs., 7:00 PM, 50 N. Hill Ave., Pasedena. Call (818)846-6682. Friendly Apple II experts.

ATARI

Atari Computer Association Of Orange County. Meetings: 2nd Sun. Rancho Santiago College, Room W101, Santa Ana. BBS: (714)540-7378.

North Orange County Computer Club Atari ST SIG. Meetings: First Sundays, Chapman College in Orange. (714)552-5185, or Bill, 633-4665, or Mac, 751-3090.

Santa Clarita Valley Atari Computer Enthusiasts (SCVACE). Meetings: 1st Thurs. 7PM Mint Canyon Moose Lodge. 18000 W. Sierra Hwy, Canyon County. 8-bit group. Atari ST special group now forming,

South Bay Atari Computer Enthusiasts (SBACE). Meetings: 2nd Tuesdays, 7:30 pm, Lomita VFW Hall, 1865 W. Lomita Blvd., Call: Alan, (213)542-7870.

West LA Atari Users Group. Meetings: 1st & 3rd Wednesdays, 7:30 pm, The Federated Group store, Santa Monica. Call: Bill, (213)559-2349.

CLIPPER

Fresno Clipper User Group. Meeting: 4th Thursdays, 7:00 pm. Call: John Rogers, (209)251-7527.

Los Angeles Clipper User Group. Meeting: 4th Wednesdays, 7:30 pm. Call: Theresa Padilla, (213)452-0370.

Orange County Clipper User Group. Meeting: 4th Thursdays, 7:00 pm. Call: Steve Hilton, (714)847-7123.

San Diego Clipper User Group. Meeting: 4th Tuesdays, 7:30 pm. Call: Mick Keily, (619)569-8234.

Valley Clipper User Group. 7:30 pm. Call: Igor Lelchitsky, (818)716-8790.

COMMODORE

Bits & Pieces Commodore Computer Group of Anaheim. Meetings: each Tues 6:30 PM 1130-A N. Kraemer Blvd. (Kraemer & La Palma), Anaheim. Offers public domain software, demonstrations, interactive training on your computer. $33 annual dues.

Commodore 64 Software Users Group. For new Commodore owners. One on one help. Call (714)531-2977 for info.

Commodore Helpers Of Long Beach. Meeting: 2nd Saturdays 9 am, Mercury Savings And Loan, 4140 Long Beach Blvd. Long Beach C-64 & C-128. Call: (213)424-0508.

C–128 West Commodore User Group. Meetings: 2nd Tuesdays, 7 pm, McKinley School auditorium, Santa Monica Blvd. (except during summer). Call: 6–9 pm, John Calhoun, (818)331-1589.

Mother Lode Commodore Users Group. Meetings: 2nd & 3rd Thursdays. Calaveras County Water District Board Room. Supports the Commodore PET, VIC, 64, Plus/4, C-16 & 128.

Nebula 6. Call BBS for more info & online glance at what group offers. BBS (714)595-6577 300/1200/2400. Write for info: P.O. Box 1071, Walnut, CA 91788.

OKOK Computer Users Group. Meetings: 2nd Wed. 7-9 PM Altadena Public Library, 600 E. Mariposa. Call (818)794-3243. Serves, Osborne, Kaypro, Commodore C128, PCs and compatibles and both MS-DOS and CP/M operating systems.

Orange County Commodore Technical Users Group (C-TUG). Meetings: 4th Sun. 11:00 AM, 4th & Tustin, P.O. 1497, Costa Mesa, CA 92628. Newsletter; 2 BBS's; door prizes; demos, raffles, speakers, (714)750-3003.

Pacific Computer Club. Meetings: 2nd Thurs. 7 PM 391 S. Madison, Pasadena, CA.

Pasadena Commodore Computer Club. Meetings: 1st and 3rd Weds. 7:00 PM Circadian Room, Pasadena City College Cafeteria. Colorado Blvd & Hill, Pasadena. Call (818)447-2212 after 2:30 PST or write P.O. Box 163, Arcadia, CA 91006. Supports C64 and 128 machines.

San Fernando Valley Commodore User Group. Meetings: 4th Wednesdays, 7:30 pm, Union Federal Savings, Sherman Way and Sepulveda Blvd., Van Nuys. (818)342-0012.

South Bay Commodore Users' Group. Meetings: 4th Tuesdays, 7:00 pm, Home Federal Savings Conference Room, 1670 Pacific Coast Highway, Redondo Beach.

South California Commodore Users Group. Meetings: 3rd Tuesday each month, 7:00 P.M., MidCities National Bank, Lakewood and Artesia Blvds., Bellflower, CA.

South Orange Commodore Klub (SOCK). Meetings: 1st Wed. 7 PM Laventhol & Horwath, Exec. Conf. Rm.7th Fl., 3699 Wilshire Blvd., LA, CA.

The Orange County Commodore Club. Meeting: 4th Saturdays, 11:00 am, Mercury Savings And Loan, Mercury Room, 7812 Edinger Ave., Huntington Beach, Call: Mike Moore at (714)968-6250, or Howard Phillips at (213)861-4165.

dBASE

UCLA PCUG dBASE SIG. Meetings: 3rd Wednesdays, 7:30 pm. Call: (213)874-7471.

Valley West dBASE Users Group. Meetings: 3rd Mon. 7:00 PM Blue Cross Of California, 21555 Oxnard St., Woodland Hills. Call (818)789-0723 or write P.O. Box 16971, Encino, CA 91416.

DEC

DECUS Rainbow Pacific PC-LUG. Meetings: 2nd Wed. 7:00 PM Digital Equipment Corporation, 6101 W. Centinela, Ave., Culver City. Digital Equipment Computer Users Society. Free to DEC users. Call Karen Danforth (818)787-8736 or write P.O. Box 2278, Van Nuys, CA 91404.

DESKTOP PUBLISHING

VICUG–DTP. (Valley IBM/Compatibles Users Group). Meetings: 2nd Fridays, 7:30–10:00 pm. Valley Plaza Recreation Center, 12240 Archwood St., North Hollywood, CA. Call: Harry Tischler, (818)997-6000.

Southern California Ventura Publisher User Group (SC-VPUG). Meetings: 4th Wednesdays, 7 pm, Social Studies School Service, 10200 Jefferson Blvd., Culver City. Questions & Answers, product demonstrations, Library of resources. Very active group! (818)955-5830.

EPSON

San Fernando Valley and Los Angeles Epson QX User Group. Meetings: 3rd Tues. 7 PM 6025 El Escorpion Rd., Woodland Hills. Call: (818)349-7417.

IBM AND COMPATIBLES

Calsonic PC Club. Meetings: 1st Tues. 5:15 PM 9 Holland, Irvine, CA.

Greater South Bay PC User's Group. Third Thursdays, @ 7 PM, Building behind Christ the King Lutheran Church, 2706 W. 182nd St. Torrance. Newsletter, BBS, more! Guests welcome. Call for more information. Evening: (213)532-2123.

IBM & Compatibles Users Group-Ontario Area. For information call: (714)982-1270.

Kern Independent User Group. Meetings: Write Kern Independent PC User Group, P.O. Box 2780, Bakersfield, CA 93303.

Long Beach IBM Users Group. Meetings: 3rd Tuesdays. 7 PM, Woodruff Medical Plaza, 3816 Woodruff Ave., Room A, Long Beach. Contact: Jim Wells. Call: (213)439-7114.

Mid-Wilshire PC User Group. Meeting: 2nd Thursdays, Conference Room of Forty Plus, 3450 Wilshire Boulevard, Suite 510, Los Angeles. Call: Robert, (818)790-5884.

OKOK Computer Users Group. Meetings: 2nd Wed. 7-9 PM Altadena Public Library, 600 E. Mariposa. Call (818)794-3243. Serves, Osborne, Kaypro, Commodore C128, PCs and compatibles and both MS-DOS and C/PM operating systems.

Orange Coast IBM PC User Group. Meetings: last Sat. 9 AM Science Hall, Orange Coast College, Costa Mesa, CA.

Orange County IBM PC Users Group. Meetings: 2nd Thursdays 7:30 PM. Bradford Retirement Community Center, 1180 N. Bradford, Placentia. Meetings feature guest speakers on hardware and software topics related to the interest of our members. Other activities include sharing tips and problems, access to club library and a club newsletter. Call: Mike Lyons, 2114 W. LaPalma, Anaheim, CA 92801. (714)774-3236.

Pacific Computer Club. Meetings: 2nd Thurs. 7PM 391 S. Madison, Pasadena, CA.

Pasadena IBM Users' Group. Meetings: 3rd. Wed. CalTech, Bridge Bldg., Rm. 201.

PC*UG Computer Club. For Hughes Aircraft Employees. Call (213)334-3422.

QUICK & EASY Mailmaster User Forum. Meetings: monthly LA/Airport area. Users interested in maximizing performance of Quick & Easy.

Riverside IBM Club. Meeting: 1st Mondays, Riverside. Call: James Heidecke, (714)685-5407.

Saddleback College IBM-PC Users Group. Meetings: 3rd Sat. Room 210, Business and General Science Building, Saddleback College, Mission Viejo. Call Susan Gordon at (714)582-4650.

South Bay Users Group (SBUG). Meetings: 1st Sun. Mercury Savings, Long Beach, CA.

South County PC Users Group. Meetings: 3rd Sat. 9 AM Great American Savings, 23688 El Toro Rd., El Toro, CA.

Technical Users Group (TUG-NET). Meetings: Call for info (818)882-6045. BBS (818)882-6045.

The Foothill Computer Club. Meetings: 1st Wednesdays, 6:30 pm, Glendale Federal Bank, 2350 Honolulu, Montrose. Call: (818)790-6672.

The IBM & Compatibles User Group (ICUG). Meetings: 4th Thurs. 6:30 PM or 7:30 CAL Lutheran Univ., 60 W. Olsen Rd., Thousand Oaks. Group is 5 yrs. old & has 150 members Meetings begin at 6:30 for beginners, 7:30 regular members.

The Southern California K-Man Users Group. Meetings: 1st Wednesday, 7:00 P.M., Laventhol and Horwath, Executive Conference Room, 7th Floor, 3699 Wilshire Blvd., LA. Demo of the month features new software and hardware.

TRS Nybblers. Meetings: 1st Wed. 7 PM 2006 W. Magnolia, Burbank. Supports MS-DOS, CP/M, IBM or IBM clones.

UCLA PC Users Group. Meetings: 2nd Tuesdays, 7 pm, Neuro Psychiatric Institute, Level C Auditorium, UCLA campus. Call: (213)650-4700.

Valley Computer Club—IBM. Meetings: 1st Wednesdays, 7 pm, Burbank Bd. of Realtors Bldg., 2006 W. Mangolia, Burbank. Call: Wes Arnold, (213)221-4433.

VICUG (Valley IBM/Compatible Users Group). Meetings: 4th Fridays, 7:30 pm, Mercury Savings Bank, 14801 Ventura Blvd., Sherman Oaks. Call: Harry Tischler, (818)997-6000.

VICUG–DTP (Valley IBM/Compatibles Users Group). Meetings: 7:30–10:00 pm, Valley Plaza Recreation Center, 12240 Archwood St., North Hollywood, CA. Call: Harry Tischler, (818)997-6000.

KAYPRO

OKOK Computer Users Group. Meetings: 2nd Wed. 7-9 PM Altadena Public Library, 600 E. Mariposa. Call (818)794-3243. Serves, Osborne, Kaypro, Commodore C128, PCs and compatibles and both MS-DOS and C/PM operating systems.

LEADING EDGE

Leading Edge Computer User Group of Ventura County. Meetings: 2nd. Sat. 10 AM Camarillo Library, 3100 Ponderosa Dr., Camarillo, CA. Lectures on hard/floppy disk usage; program demos; beginner classes. Single: $20, couple $25.

MACINTOSH

APX, Inc. An national intercorporate computer users information service with several communications channels including an electronic forum on MacNet, newsletters, and local and national meetings and special panels. Several local chapters exist, you can start one too. Call: (408)745-0665.

Professional Associations

ACCPAC Accounting SIG. Meetings: 2nd Wednesdays at 7 pm. Users, CPAs, consultants, and other business people interested in sharing information on Computer Associates' ACCPAC Accounting software. Call Donna Miller, (213)393-0244.

California Educational Computing Consortium (CCCE). For information, write Herb Garrett, Long Beach City College, 4901 E. Carson ST., Long Beach, CA 90808.

Computer Professionals for Social Responsibility. Meetings: Most third Wednesdays, 7:30 pm, UCLA. CPSR/LS focuses on computer system risk and reliability and on privacy and civil liberties issues.

Independent Computer Consultants Association (ICCA). Meetings: Monthly. Call: Los Angeles, (805)253-1973; Orange County, (714)852-6164; San Diego, (619)294-6550.

International Blind Users Group (I-BUG). Part of the National Association of Blind and Visually Impaired Computer Users. Membership consists of access to CompuHelp, a 24 hour online database/bulletin board system, and receiving CompuHelp On-Disk, a modem database bulletin board system on two double-sided disks. Call: (916)783-0364 or 645-8036.

LA Real-Time Problem Solvers. Meetings: 4th Saturdays, 10 am to 1 pm, Hawthorne Public Library, 12700 S Greviellea Ave., Hawthorne. We speak A/D, SBC, RISC, FORTH, and C. We support real-time, real-world hardware and software problem solving, such as firmware, device drivers, instrumentation and very smart toasters. Call: (213)371-0589.

National Account-A-Call Users Group (AACNUG). Meetings: First one held in June. Call: Shelly Schoenberger, 1-800- 447-TUMS.

North Orange County Computer Club (NOCCC). Meetings: Monthly on Sundays, Chapman College near downtown Orange. Help for beginners, SIGs, educational activities, monthly newsletter. Open to any computer user. Call: (714)998-8080.

Realtor Microcomputer UG (RUG). Meetings: 4th Thursdays, 7 pm, Pasadena BOR, corner of Orange Grove and Los Robles, Pasadena, CA.

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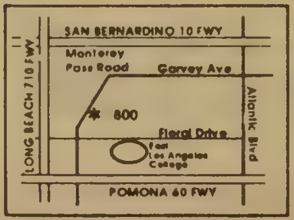

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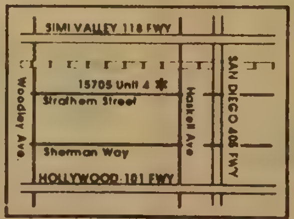

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West Orange County Macintosh Users Group (WOCMUG). Meetings: Last Tuesday. F & M Bank in Rossmore Center, Orange County, CA.

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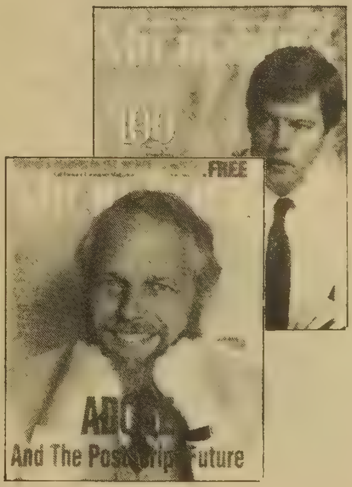

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IDM 59
IIT 76
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Micro-City 55
Microdeal 97
Octo Computer Company 90
Optocad 88
P.G. Computers 75
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Pillarco 104
PRC Technology 85
Pro-Tect Computer Products 80
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Rantek Computer Center 25
Richard James 99
Sefco 9
Shecom Computers, INC. 33
Shore Solutions 23
Sim Trade 18
Simplex Micro Products 78
Software Computer Xtra 4,5
Songtech 35
Subscription Coupon 99
T.F. Golden 87
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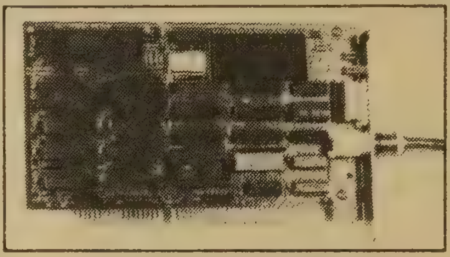

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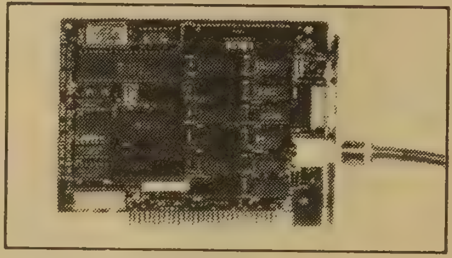

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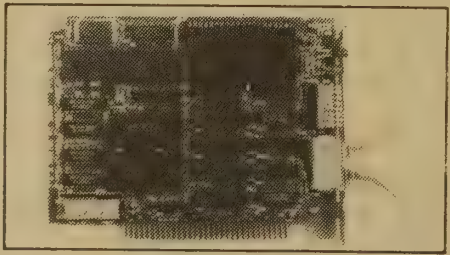

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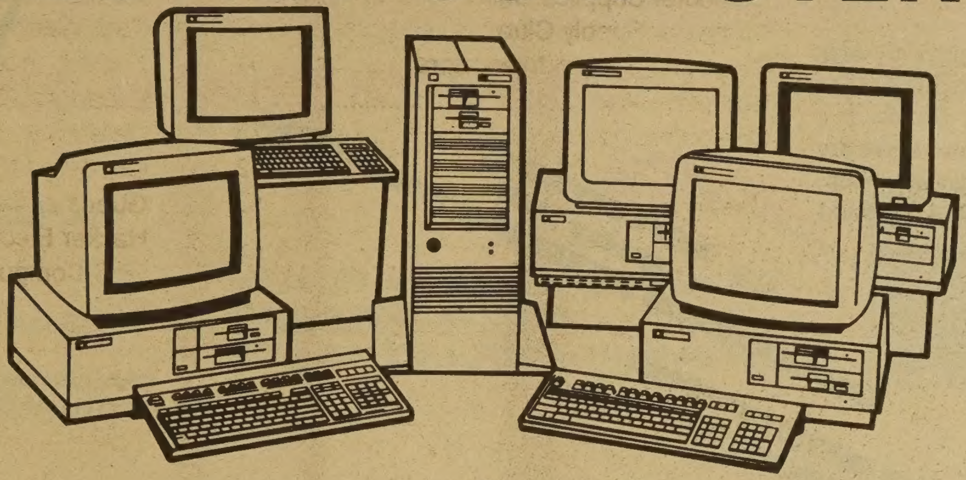

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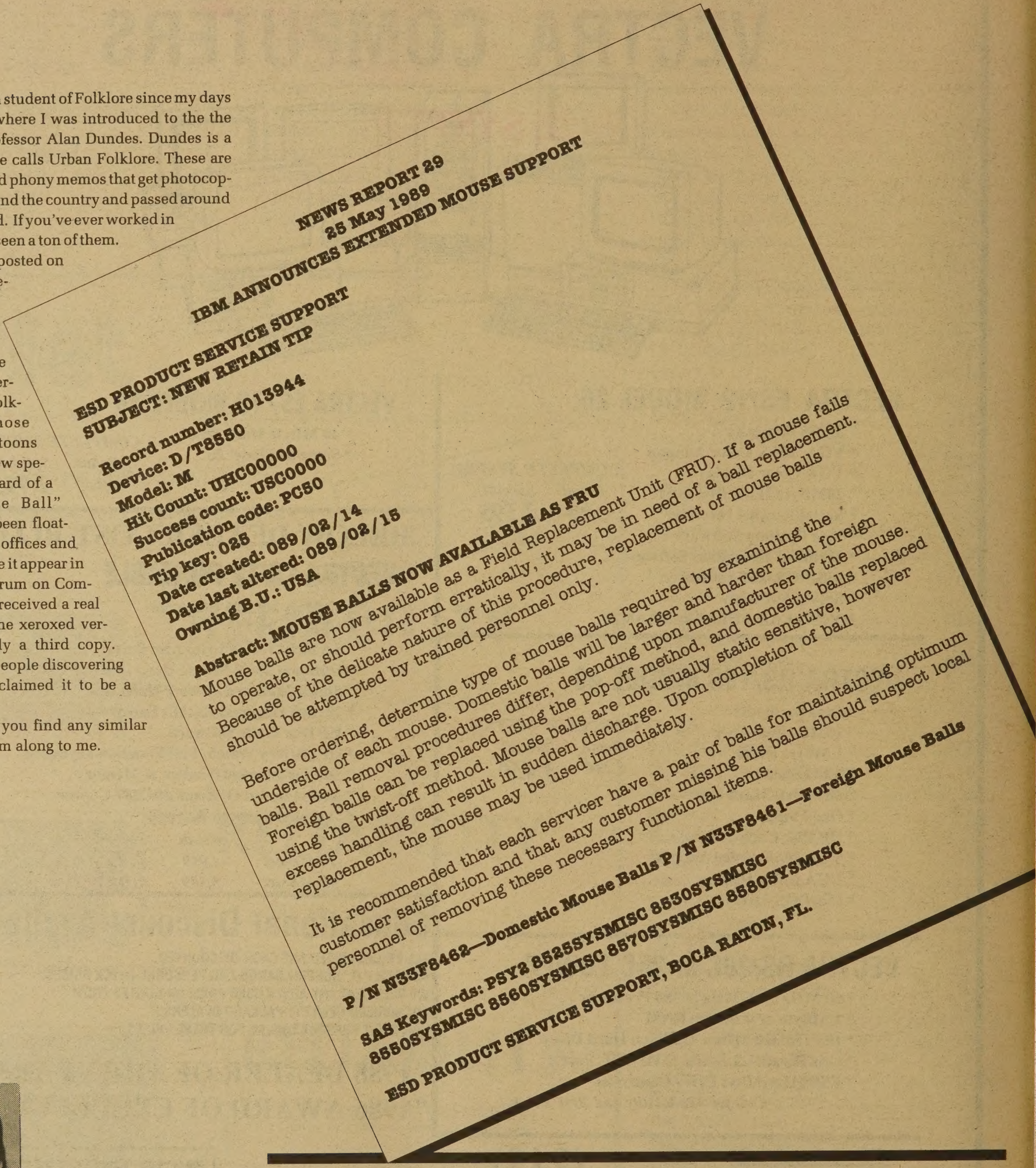
The Famous Mouse Ball Memo Revealed

I've always been a student of Folklore since my days at UC Berkeley, where I was introduced to the the discipline by Professor Alan Dundes. Dundes is a big fan of what he calls Urban Folklore. These are those cartoons and phony memos that get photocopied in offices around the country and passed around from hand to hand. If you've ever worked in an office, you've seen a ton of them. Usually they are posted on someone's bulletin board for all to see.

There hasn't been much in the way of computer-related jokes or folklore except those commercial cartoons developed by a few specialists. I had heard of a famous "Mouse Ball" memo that had been floating around some offices and was pleased to see it appear in the PCMagnet forum on CompuServe. Soon I received a real copy of one of the xeroxed versions, and finally a third copy. Each one of the people discovering this memo has claimed it to be a genuine memo.

Yeah, right. If you find any similar memos, pass them along to me.



NEWS REPORT 29
25 May 1989
IBM ANNOUNCES EXTENDED MOUSE SUPPORT

ESD PRODUCT SERVICE SUPPORT
SUBJECT: NEW RETAIN TIP

Record number: H013944
Device: D/T8550
Model: M
Hit Count: UHC00000
Success count: USC0000
Publication code: PC50
Tip key: 025
Date created: 089/02/14
Date last altered: 089/02/15
Owning B.U.: USA

Abstract: MOUSE BALLS NOW AVAILABLE AS FRU
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P/N N33F8462—Domestic Mouse Balls P/N N33F8461—Foreign Mouse Balls

SAS Keywords: PSY2 8525SYSMISC 8530SYSMISC 8550SYSMISC 8560SYSMISC 8570SYSMISC 8580SYSMISC

ESD PRODUCT SERVICE SUPPORT, BOCA RATON, FL.

Each one of the people discovering this memo has claimed it to be a genuine memo.

John C. Dvorak graduated from the University of California. He is a contributing editor of PC Magazine and MacUser, considered by many to epitomize the contrarian view of things—a charge that he vehemently denies. Dvorak's motto is: If you have nothing nice to say, then don't say anything at all.

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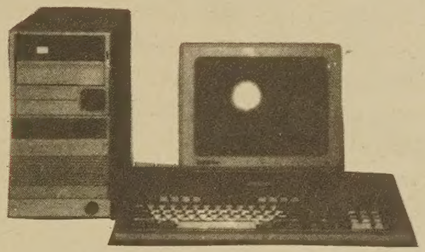

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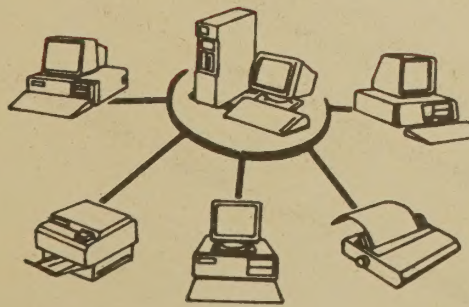

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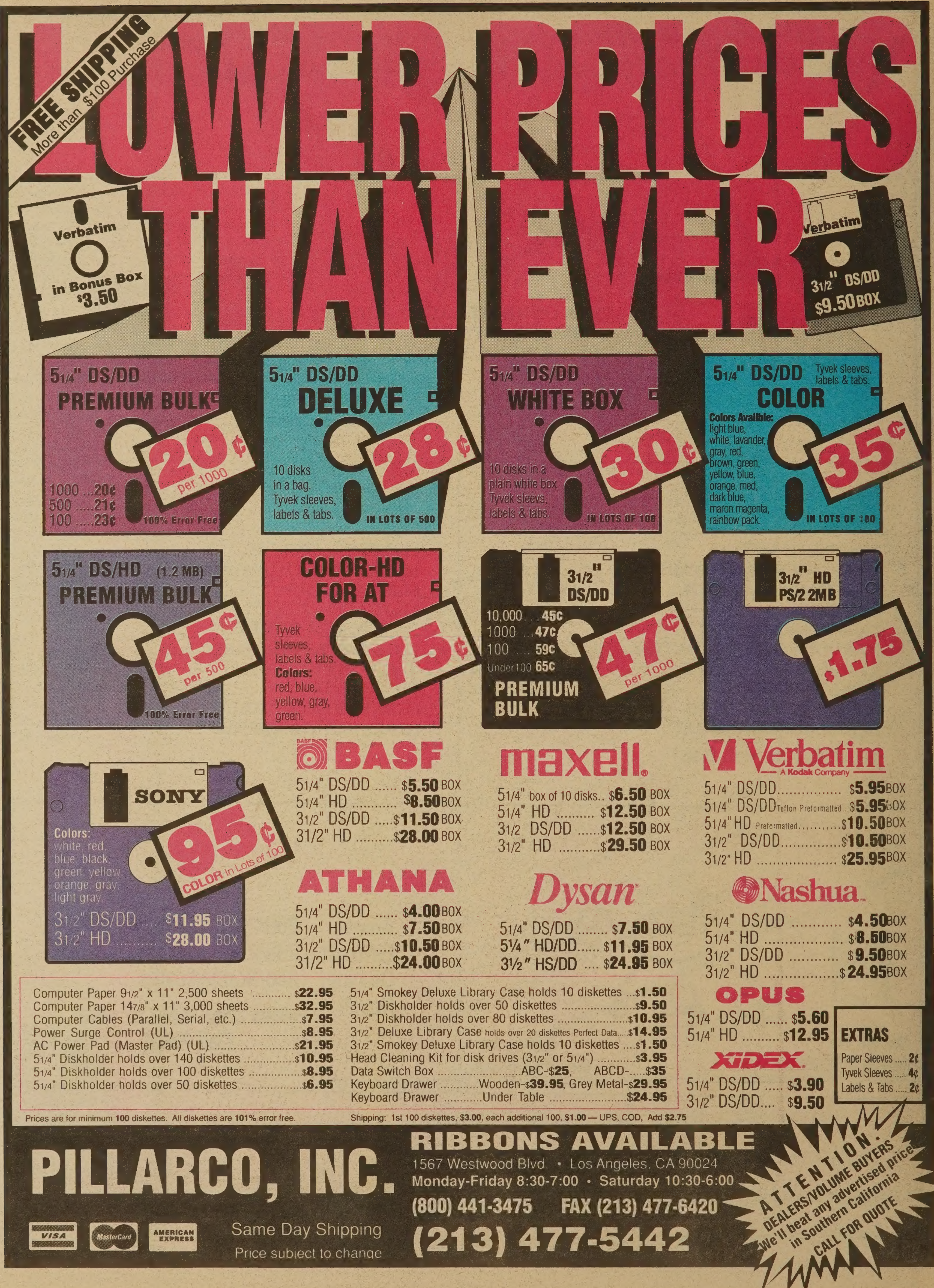

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